

**Digital divides in Greece: the role of society's culture
and decision-making from a top-down and bottom-up
perspective. Implications for the European
information society**

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**A thesis submitted in partial fulfillment of the requirements for the
degree of Doctor of Philosophy in Media and Communications**

**London School of Economic and Political Science
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Abstract

The thesis investigates digital divides in Greece, looking specifically at parameters of Internet adoption. It aims to reach beyond access and usage issues, placing Internet adoption within a socio-cultural and decision-making framework.

Theoretically, the thesis is structured around three perspectives. First, it draws upon Alfred Schutz's 'everyday life-world' and argues that digital divides should be explored by scrutinising the interactions of individual and systemic agent(s) in an everyday life framework and as part of a continuum of evolution in time. To understand, in particular, Greece's delay in adopting the Internet, the thesis draws on Martin Bauer's work on resistance to technology and argues in support of research to examine the driving forces behind techno-phobia and other forms of resistance. To complement these perspectives on socio-cultural forces, the importance of structural factors is recognised by drawing on the sociology of policy and regulation and pointing out the need to look at the role of society's culture in policy and regulation practices. It thus draws on historical accounts of Greece, introducing cultural indicators that are critical for disentangling policy and regulation in the Greek information society.

Empirically, the thesis reveals that in Greece decision-makers appropriate society's culture to serve their own professional interests, without responding to society's needs for accountability and visibility, and that patronage networks, bureaucracy and traditionalism have provided the space for public authorities to direct a weak civil society. Meanwhile, ordinary people dismiss technologies and are critical of policy and regulation which put established everyday life cultures at risk, but also appropriate decision-making mechanisms which serve their individual interests. With profound interdependencies between decision-making and civil society in Greece, policy and regulation have not only failed to drive societal change but have themselves been influenced by the societal traits of traditionalism and techno-phobia that deter Internet adoption. These findings also raise implications for the European information society.

Methodologically, mixed and multiple data sources are employed, enabling a comparison and cross-validation from a complementarity and triangulation perspective of data collected on the complex issue of digital divides. The advantages of multiple source data over single methodological approaches are thus demonstrated, offering a potential contribution to other research in the field.

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1. Introduction

1.1 Overview

The digital divide has been a huge concern worldwide. This thesis inquires into the factors shaping digital divides in Greece, a country lagging behind the rest of Europe and widely seen as resistant to information society developments.

The thesis examines factors that shape digital divides in Greece and are related to ordinary people's everyday and resistant culture, on one hand, and to decision-making, on the other. Although the phenomenon is often referred to as 'the digital divide', the thesis argues this phenomenon has many facets, that there are multiple digital divides. However, the present research does not tackle all the different digital divides. Rather, it examines Internet adoption in Greece and specific aspects of it such as Internet use, the quality of use, concerns about online risks, self-protection on the Internet etc. The thesis explores ordinary people's insights into Internet adoption and links them to the role policy-makers and regulators play through their decision-making strategies to boost the information society. The thesis argues that complex connections between society's culture and decision-making significantly account for the persistence of digital divides in Greece.

The decision to examine the role of these factors was driven by the existence of research that examines the drivers of digital divides lying in the societal domain as opposed to those related to policy and regulation, while often restricting its focus on economic and access factors. Besides, the case of Greece fits well into this research framework because the Greek information society appears as a distinctive case in the European region and because cultural and political trends seem to have played a significant part in how certain aspects of digital divides evolve in the country.

To address these research and country-specific challenges, the thesis asks: *How do society's culture and Internet policy and regulation influence digital divides in Greece?* In particular, the research seeks to answer the following questions:

1. What are the general characteristics of the Greek information society?
2. How far does society's culture influence digital divides in Greece?
3. How far do Internet policy and regulation influence digital divides in Greece?
4. How do society's culture and Internet policy and regulation intersect in influencing digital divides in Greece?

1.2 *Digital divides: research challenges and the case of Greece*

The phenomenon of digital divides has been strongly debated and continuously evolved since technology and the socio-economic, cultural and political frameworks where technology is formed and taken up are also evolving. The questions are what can this thesis offer that is new and why is it important to look at digital divides from a socio-cultural and decision-making perspective, and with respect to the case of Greece. This section illustrates the thesis' importance by discussing its two main research foundations: Section 1.2.1 discusses digital divides and the research challenges in relation to the role of society's culture and decision-making; Section 1.2.2 presents the Greek case and its importance as a case that stands on its own and distinctively in the broader European framework.

1.2.1 *Digital divides research and challenges*

The OECD reports on how digital divides are commonly measured: access lines and channels; mobile and Internet subscribers; broadband subscribers; availability of Digital Subscriber Lines (DSL); households with Internet and home computer access; Internet penetration by size class; Internet selling and purchasing by industry; telecommunication services revenue; telecommunication infrastructure investment; R&D expenditure; trade in ICT goods; ICT investment's contribution to GDP growth; top 50 telecommunications and IT firms.¹ This list shows that the Internet is a key technology in the information society and that economic and market indicators of development are emphasised. Yet what seems to be missing are indicators of how ordinary people negotiate the meaning, value and use of Internet technologies, as well as evidence of how decision-making responds accordingly. Also, in the series of OECD IT Outlook reports (2006, 2004 & 2002a) countries with completely different socio-economic, political and cultural characteristics are compared purely from a technological and market perspective.

Along these lines, from the early phase of digital divides scholars have offered relevant criticisms: '...so many "bits", so much economic growth – are readily quantifiable, thereby alleviating analysts of the need to raise qualitative questions of meaning and value' (Webster, 1995: 29). These criticisms concern the lack of 'institutional and cultural analyses' (Calabrese, 1999: 312) and make researchers raise the role of other parameters, such as everyday life, in the configuration and development of technology: 'everyday life changes to accommodate the various technologies penetrating it...or, rather, does everyday life itself induce transformations in technological systems and artefacts?' (Bakarjieva, 2005: 82). Also, research points out implications of sociological and cultural approaches to digital divides for policy-making

¹ A list of the OECD indicators of information society is available at: www.oecd.org/sti/ICTIndicators.

as they can inform public policies and broaden the scope of considerations that top-down policies take into account (Preston, 2005). These implications concern the mission of policy and regulation to, besides all other areas of action, co-ordinate the communication process between all agents involved, such as media communicators, media technologies, media adopters and media content/messages, towards shrinking the divides.

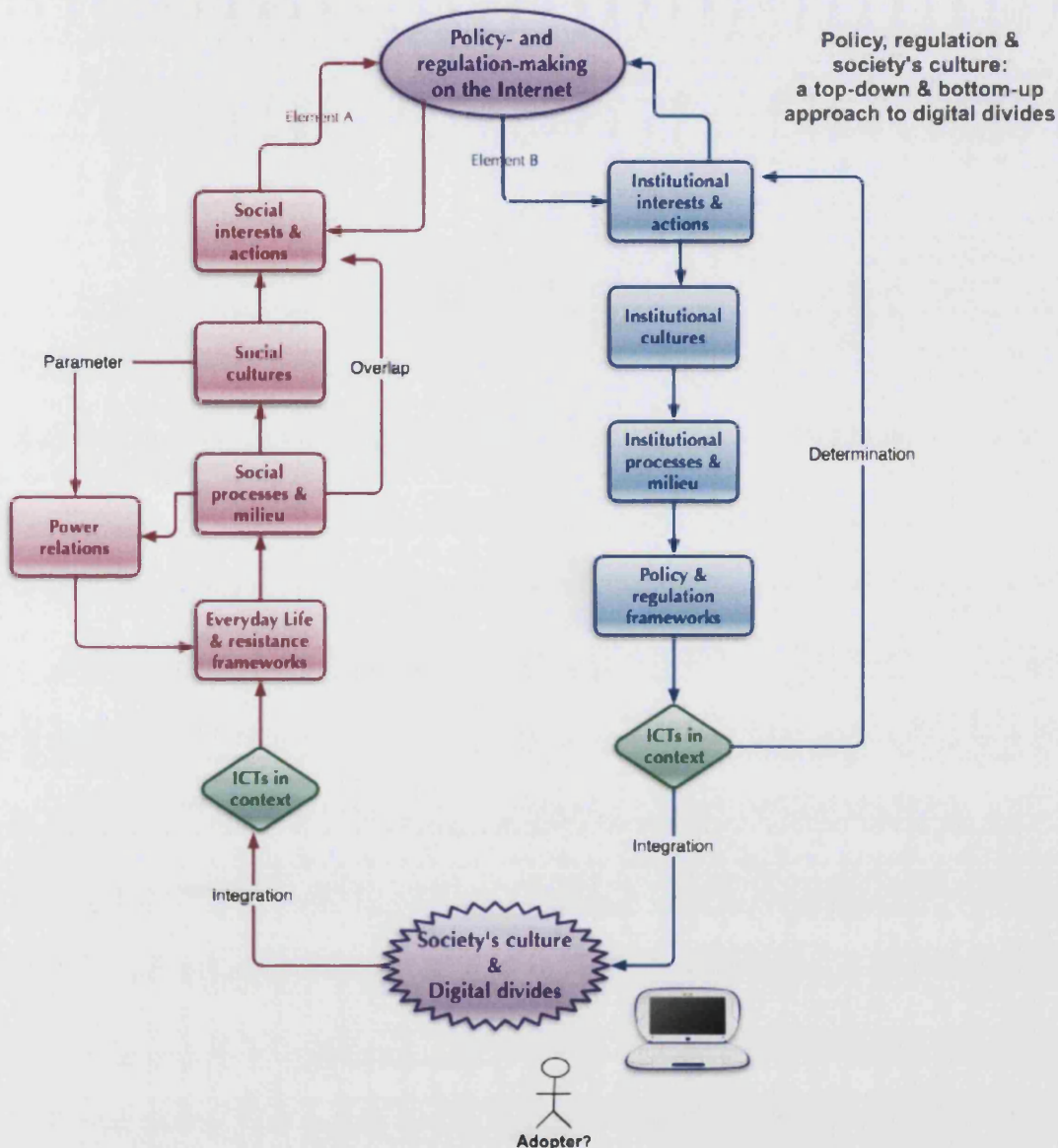
Garnham (1999) employed Sen's (1992 & 1999) capability approach in his media work and illustrated, though not directly, the importance of empirically exploring the role of socio-cultural and decision-making factors in digital divides. Garnham (ibid: 121) argues that 'it is the real availability of opportunities and the real achievement of functioning that matters'. While policy and regulation are responsible for the technological options offered to individuals, culture determines people's abilities² to make effective use of those options (ibid). In this sense, the importance of the emphasis that policy and regulation place on ensuring universal access for the provision of equal chances to people (Burgelman, 1999: 128) is restrained by people's complex and multi-dimensional capabilities in particular cultural contexts.

The role of society's culture in shaping the aspects of inclusion or exclusion and its implications for policy and regulation constitute a key incentive for this thesis to examine digital divides in a cultural framework and in connection to relevant policies and regulations. The thesis can benefit from examining Preston's argument about policy implications and by understanding how people's attitudes to technological artefacts in everyday and cultural settings are linked to the ways in which policies and regulations tackle issues of exclusion in the information society.

On this basis, the figure below (Figure 1-1) portrays the research framework of the thesis. Society's culture is to be treated as influencing the political and regulatory status of affairs (Element A), with the latter responding and either sustaining or challenging the cultural grounds of social life (Element B). This figure does not capture the full complexity of relationships and instead provides a simplified picture of the aim to depart from economic, technological and socio-deterministic accounts of digital divides. Nevertheless, it illustrates the focus on ordinary people's adoption of the Internet in an everyday cultural context on one hand, and on decision-makers' practices and frameworks of action on the other, leaving the thesis to explore the potentially complex relationships between society's culture and decision-making in the case of digital divides in Greece.

² Abilities not only refer to people's physical, mental and educational skills but also to their psychological conditions, life principles and attitudes when they use media technologies. This is so as to '...distinguish between different potential uses of the media and the uses actually made and to ask why potentialities available are not actualized' (Garnham, 1999: 121).

Figure 1-1: Mind-map of the research



1.2.2 Digital divides and the case of Greece³

Digital divides in Greece is an interesting case to research. This is because the Greek information society appears to be lagging behind other countries in the European region and because Greece is widely considered resistant to information society developments given its quite distinctive overall cultural and political milieu. The thesis argues that the case of Greece can illustrate the role of society's culture and decision-making in shaping digital divides, constituting a research basis for similar research to be conducted at the cross-national level or in other country cases. However, the thesis does not conduct comparative research. It positions Greece in the European framework, highlights the distinctiveness of the Greek case and attempts to

³The main trends in the Greek information society, digital divides in the country and the socio-cultural and policy traits of the Greek context are all presented in more detail in Chapter 3.

explain the driving forces of digital divides in the country, without examining internal divides within the country or in comparison with other countries in Europe.

Looking at the history of the information society in Greece, one can conclude that Greece has for a long time been slow in the diffusion of networking technologies and services. According to the OECD Outlook 1999, Forbes and ESIS-ISPO data for 1998, Greece had 0.14 secure web servers for electronic commerce per 100,000 inhabitants compared to the average of 2.04 in OECD countries, with only 1.1% of the Greek population being online and 125 per 1,000 inhabitants using PCs. In the same year, there were 14.3 mobile phone lines per 100 inhabitants Greece, much less than the EU average of 22.1 lines. Also, Greece was the EU member state with the smallest usage of communications systems such as PCs (12.2% in Greece and 30.8% as the EU-15 average), CD-ROMs (7.0% in Greece and 20.8% as the EU-15 average), modems (2.4% in Greece and 9.3% as the EU-15 average) and Internet connections (2.9% in Greece and 8.3% as the EU-15 average).

The recent history of networking technologies and services seems to perpetuate this trend of slowness in Greece. The 2005 national survey on the use of new technologies (GRNet, 2005) shows an increasing penetration of ICTs in Greece for the 2001-2003 period and a stagnancy of the adoption of new technologies for the 2004-2005 period. In 2005, the five-layered indicator of new technology use rose by only 0.3% (13.6%), whereas the share of the population not using new technologies dropped by 2.7% (ibid: 125). Along these lines, the latest national survey reports the uneven diffusion of information society indicators set by the eEurope and i2010 initiatives (Information Society Observatory, 2007). Likewise, European research shows that Internet indicators remain at particularly low levels in Greece. In the Eurobarometer survey of 2005 (EC, 2006), Greece had the lowest percentage of Internet users (24%) in the EU-25 (49%). Even Spain and Italy are closer to the EU-25 average, with Portugal just ahead of Greece (27%).⁴ Although the thesis does not espouse the vision of a single and synchronised European information society, especially in the way European institutions and the EC have articulated it, these figures indicate that information society indicators have not developed in Greece as much as in other European countries.

To explain the relatively disadvantaged position of Greece, one must understand the forces driving the country's information society. The following statement points to technological, infrastructural and economic prerequisites for the information society to develop and emphasises the barriers found in society's culture and decision-making practices in the Greek information society:

The geographical, demographic, administrative and economic particularities of our country are clearly illustrated at the regional level and present a challenge in view of the possibilities offered by the new

⁴ Internet usage in the EU-25 ranges from 85% in the Netherlands to 24% in Greece (EC, 2006: 6).

information technologies... **A technological prerequisite**, i.e. state-of-the-art telecommunication and radio-television infrastructure, covering almost the entire country at affordable prices... **A social and democratic prerequisite**, i.e. thorough information of the local population on the importance of modernisation and, also so as to enhance the ability to absorb new technologies... **An organisational and functional prerequisite**, i.e. securing the local presence of trained "operators"... **Prejudice and ignorance, resulting from the lack of knowledge and information often cause resistance to the introduction of new technologies.** This, in turn, leads to limited penetration and exploitation of the technology while, in addition, **it obstructs participation in decision-making procedures...** (emphasis added) (PDGS).

As regards decision-making for the information society in Greece, the White Paper of 2002 stated that Greece was still 'relatively behind in the course towards the emergence of the information society', as 'unsuitable structures, bureaucracy, inadequate staffing, deficient planning and lack of assessment and feedback' (Greek Ministry of the Economy and Finance, 2002: 9) contribute to a static policy environment hindering the development of the country's information society. From a European perspective, the Greek government started to liberalise and privatise the broadcasting and telecommunications market in the early 1990s, and telecommunications regulation in Greece has been marked by a long history of delays and inconsistencies. The 10th European Commission (EC) report on implementation of the EU Electronic Communications Regulatory Package (EC, 2004a) stated that five countries, including Greece, had not transposed the framework one year after the deadline. As a consequence, the Commission launched infringement proceedings for non-notification and proceedings were pending before the European Court of Justice against Belgium, Greece and Luxemburg (ibid: 9). In January 2006 the EC sent Greece a formal request asking for information regarding its compliance with the Court of Justice (CoJ) ruling of 14 April 2005 concerning the country's failure to implement electronic communications liberalisation by the set deadline.

In terms of society's culture, national research hints that this may be one of the directions to look at in order to explain digital divides. Surveys such as the 2006 survey by the National Statistical Service of Greece (ESYE, 2006) conclude that most Internet non-users in Greece do not use the Internet because they lack the desire or interest. Also, EC research (2006 & 2004a) argues that people in Greece are highly reserved about the Internet and insecure when going online. Although this lack of interest in and need to use the Internet is not unique to Greek culture, it appears to be greater in Greece than in other countries. Also, it appears to be interconnected with other elements of social and political life in the country making resistance a key driver of people's attitudes to the Internet.

In searching for the causes of what is perceived as resistance to Internet and other technologies in Greece, one could draw on historical analyses of the Greek context. Such analyses examine the 'intermeshed' relationships between the state and civil society and argue that they have discouraged the adoption of new technologies in the country by making civil society dependent on state structures and highly inflexible

to change and evolution. Greek Prime Minister Kostas Karamanlis recently argued⁵ that there is a common feeling among Greeks that society relies too much on state authorities and the state's role has expanded extremely and is less efficient than it should be. He acknowledged that significant residues of past mentalities still exist in the country, yet without referring explicitly to the dominance of the intermeshed relationships between the state and society.

In concluding this section, the present research explores the Greek information society and its digital divides as a relatively distinctive case in Europe with society's culture and decision-making being noted as possible causes of delays and non-progress in the country. The aim of the research is to provide empirical evidence about such arguments along with insights into whether and to what extent society's culture and decision-making intersect. It seeks to take into consideration that 'societal change takes more time. It requires organizational changes, a shift in mindsets, modernization of regulation, different consumer behaviour, and political decision' (EC, 2002: 18).

1.3 *The digital divides literature and the concepts of society's culture and decision-making*

The thesis is framed by literature that examines key trends in the information society and consequent changes in how people are adopting Internet technologies. This section outlines some of this literature and underlines the importance of the concepts of society's culture and decision-making for gaining a better understanding of digital divides.

1.3.1 *The information society*

The information society is the context in which digital divides emerge, take shape and evolve, and it has attracted significant research and public attention. In popular approaches, the information society is defined as 'the use of information and communication technologies and the related social, economic, political and cultural developments linked to the growing availability of new forms of information and means of communication' (Mansell and Steinmueller, 2000: 8). In etymological terms, the notion of the information society has been criticised for taking on the static, a-social and non-dynamic term 'information' instead of the dynamic and interactive term of 'knowledge' and 'communication' (Siochru and Bruce, 2003: 1; Silverstone and Sorensen, 2005: 213-214). A similar techno-centric emphasis is noted in approaches to the history

⁵Source: notes taken from the public lecture by the Prime Minister of Greece at the LSE, 20 November 2006.

of the information society, which began in the first years after World War II with the advent of the digital-stored programme computer and gained great potential in the 1990s. A chain of technological, industrial and societal changes lie at the core of this newly emerging information era that many call the 'media revolution' (van Dijk, 1999) and surround it with a widespread 'rhetoric of revolution and crisis...a rhetoric of competing utopian or dystopian visions' (Silverstone, 1996: 218).

Regarding ordinary people, scholars have claimed a series of new possibilities in the take up of technologies. Space and time fragmentation, 'time-space compression' (Harvey, 1989 & 1993) and 'time-space distancing' (Giddens, 1994) are claimed to be some of the changes that people experience through new media technologies. Information and communication technologies (ICTs) are seen as capable of paving new paths for 'virtual' collaboration and community-building across time and space distances. The effects of ICTs on economies are seen as revolutionary and supportive of the establishment of the information industry and the advent of economic prosperity of a new quality and scale (Splichal, 1994; Toffler, 1983). Others note the effects of ICTs on democracy and culture (see Evans, 2004: 14-8), with ICTs spanning all areas of social life.

Although the role of ICT users in development of the information society is acknowledged (Mansell and Steinmueller, 2000: 21), the interdependencies between users and the political, social and cultural context in which people use and take advantage of technology are very often not at the epicentre of discussions accounting for the information society and its consequences: 'the realization of socio-economic consequences lies in the ways that technologies are designed, deployed or evolve according to the "logic" of the incremental search for better ideas and approaches' (ibid: 21-2). On the other hand, Webster (1995: 6-29) identifies five dimensions of the information society – technological, economic, occupational, spatial and cultural – and argues that although the cultural conception of the information society 'is perhaps the most easily acknowledged' it is 'the least measured' (ibid: 21).⁶ The cultural dimension relates ICTs and the ways they are used to people's everyday life and culture. This dimension indicates, at least partly, the existence of a multi-stage process in how technology is adopted, influencing human activities and communications.

1.3.2 *Digital divides: nature, sources and significance in the information society*

Regardless of the technological advances achieved and the often techno-deterministic approaches to the information society, inequalities in the distribution, access and use of ICTs frame the notion of digital divides.

⁶ Webster (1995: 7) describes these five facets as 'mutually exclusive', but they normally co-exist, overlap and depend on each other, questioning the scope and characteristics of the information society.

'Digital' refers to hardware, content and applications, and points to heterogeneous information, resources and services that individuals access through various technological platforms (Selwyn, 2004a: 346-7). The concept of the 'digital divide' appeared in the 1990s as an umbrella concept and is conventionally understood in terms of access to and usage of digital technologies: 'unequal access to technologies or digital exclusion at an international as well as a local level' (Cammaerts and Audenhove, 2003a: 7). In diffusion terms, Mansell (2002: 407) defines the digital divide as 'the uneven spread of the new media'. Some discuss it without looking at any specific ICT technology (Selwyn, 2004a; Frissen, 2003).

The thesis adopts the term in its plural meaning since many different aspects and forms of divides co-exist today: 'this is, in fact, a whole series of interlocking "divides" – the gaps that separate segments of society as well as whole nations into those who are able to take advantage of the new ICT opportunities and those who are not' (OECD, 2000a: 3). These 'interlocking' divides go beyond the access to and usage of technology, while their nature, scope and importance evolve along with the social, economic and political conditions in which technology is designed, developed and consumed. Also, the thesis focuses on Internet technologies and examines Internet adoption in Greece as a critical facet of digital divides.

Digital divides is a complex phenomenon, a complex and problematic object of study (Haddon, 2004) and some wonder whether it has any real meaning (Brady, 2000; Chaney, 2000). Gunkel argues that 'the problems of the digital divide have been and probably will continue to be moving targets', suggesting that 'the term's definition should be similarly mobile' (2003: 505). In this respect, Warschauer (in press: 1) questions our understanding of the phenomenon: '[t]he "digital divide" is one of the most discussed social phenomena of our era. It is also one of the most unclear and confusing. What after all is the digital divide?' As a result, it is widely considered a shifting area of research (Compaine, 2001a).

Initial literature stressed technological advancement or inequalities in relation to socio-demographic causes and effects (e.g. Angwin and Castaneda, 1998). For some, 'divide' implies a strict dichotomy by bipolar accounts, the "'all or nothing' scenario" (Gunkel, 2003: 506) and neat 'social stratification' (Warschauer, in press: 1). Again, others have contrasted this dichotomy, arguing about the need for 'sufficient sociological sophistication' (Webster, 1995: 97).

Regarding the sources of digital divides, researchers' attention has been conventionally drawn to socio-economic and demographic differences as the main source of divisions between 'haves' and 'have nots'. However, empirical surveys, commentaries on empirical findings and other scholarly works (NTIA, 2001a, 2001b & 2000; Hoffman et al. 2001; Walton, 1999; Wilhelm, 2001; Walsh et al. 2001; Kirkup,

2001) have reported contrasting findings with regard to existing inequalities and the role of demographics.

At an early stage of the discussion, Silverstone and Haddon (1996a) showed that people's use of media technologies depends, among other factors, on the aims of use and 'the disposable time'/ 'temporal capital'. Today, there is an increasing volume of literature that challenges the simplistic 'bipolar societal split' between 'haves' and 'have nots', and illustrates the role of physical, digital, human and social resources in posing barriers to access to and use of ICTs (Warschauer 2003a: 6). Regarding the Internet, it is argued that, although 'social divisions in internet access continue to exist' (Wyatt et al., 2002: 29), the breadth of online activities, abilities, skills, means to overcome potential barriers to functional use, as well as 'techno-culture' (Selwyn, 2004a) are becoming increasingly important for digital divides. Thus, inequalities in the skills and usage of ICTs (Hacker and Van Dijk, 2003: 324; Perri 6 and Ben Jupp, 2001: 7), as well as 'cohort' and 'awareness' (Katz and Rice, 2002: 35-65) have been seen as other aspects of divides.

In this context, the focus of the thesis, namely Internet adoption (i.e. Internet use, the quality of use, concerns about online risks, self-protection on the Internet etc), is seen as a critical aspect of divides that influences the overall course of the phenomenon and allows other forms of digital inclusion and participation to be examined. The thesis contends that the parameters of Internet adoption are inseparable from daily routines and an integral part of policies and regulations in the information society. Existing literature often connects digital divides to 'social exclusion and deprivation' (Haddon, 2000), as well as to 'community involvement and social capital' (Kavanaugh and Patterson, 2001). General accounts of why we should look at digital divides view this phenomenon 'as a practical embodiment of the wider theme of social inclusion' (Selwyn, 2004a: 343). Thus, scholars argue about the overall importance of the phenomenon for the market and the economy,⁷ as well as for social inequalities which can either be increased due to digital gaps (van Dijk, 1999: 235) or decreased due to the curing potential of new media (Mansell, 2002: 407).

Going beyond normative accounts of ICTs as creators of a 'more harmonious and egalitarian society' (Cammaerts and Audenhove, 2003a: 8), a growing volume of the literature acknowledges that digital divides emerge in complex realities (Haddon, 2004). In these realities, people's needs, desires, skills, capacities and social roles matter (Mansell and Steinmueller, 2000: 37) and significant implications emerge for the empowerment of people's citizenship (Couldry, 2003). The discussion of the role of digital divides in social inclusion, citizenship and deliberative democracy is gaining increasing importance in the literature as it has the potential to shed light not only on the role of digital divides but also on the relationship between social inclusion and the

⁷For instances of this rhetoric, see Couldry, 2007: 385-8.

degree of digital opportunities or restrictions that people are subject to. Appropriating Sen's capability approach (1992 & 1999),⁸ Couldry (2007) elaborated the idea that people's capabilities are important for communications, emphasising the implications for communicative entitlements and democracy. Also, within the spirit of Sen's 'capabilities' Mansell (2002) suggests new media configurations and a 'rights-based approach to new media policy' (ibid: 409) that will empower ordinary people, providing them with an active role in communications based on their capabilities and beyond the mere consumption of content.

Discourses on digital exclusion and citizenship allow a better understanding not only of the importance of digital divides but also of the nexus of relationships between ordinary people (or citizens) and decision-makers in relation to digital divides. People's engagement with digital technologies relates to technology design, which needs to be flexible, as well as to policy support of social rights and participation (Mansell and Stenueller, 2000: 40-52). The role of politics is well embraced by the debate between defenders and opponents of the welfare state model. This debate obtains new interest as social rights and services go hand-in-hand with communication issues such as 'media access, public service broadcasting, universal telephone service, trade and investment of global telecommunications, media education, and cultural identity' (Calabrese and Burgelman, 1999: 2). The debate is also closely related to regulation since market criteria and free market competition are, from a neo-liberal point of view, to replace tight regulations and state intervention, with the latter being the foundations of the welfare state.

These issues point to the importance of looking at decision-making practices and citizenship⁹ in communications by situating ordinary people at the epicentre: '...access to and competence in the use of the means of communication arguably define a relationship that contributes substantially to defining the quality of the experience of citizenship in the modern world' (ibid: 8). Communications influence people's inclusion and participation, with the latter being dependent on social, political and economic provisions, further challenging policy and regulation processes (Henten, 1999: 85-6).

1.3.3 *Digital divides: the role of society's culture and decision-making*

The above discourses have driven the thesis to look at the role of society's culture, and specifically of everyday (e.g. Bakardjieva, Silverstone, Berker, Haddon and others) and resistance culture (e.g. Bauer, Wyatt and others), in the adoption of information, communication and other technologies. Also, the research accounts for

⁸ Garnham (1999) was the first to integrate Sen's 'capabilities approach' in media and communications.

⁹ Although citizenship and its importance are brought up in the empirical findings I obtained, the examination of citizenship in relation to digital divides is not at the core of this thesis. Citizenship touches on many aspects of social life and activity, while it entails implications for policy- and regulation-making.

the role of decision-making, and specifically of policies and regulations, in the shrinking of digital divides (e.g. Mansell, Garnham, Preston, Silverstone; Pauwels & Burgelman and others). On the grounds of these research threads, the thesis examines society's culture and decision-making separately as well as together. It does so in order to understand ordinary people's decisions to adopt the Internet or not by accounting for their dispositions to and evaluations of the Internet and by linking this to what is often considered practice-oriented and problem-solving policies and regulations in the information society.

Culture is a broad concept and constitutes a key object of analysis in cultural studies (Hall, 1980a & 1980b), the humanities (Hoggart, 1957), linguistics (Saussure, 1974; Levi-Strauss, 1968) as well as in sociology and Bourdieu's hierarchical view of culture as 'cultural capital' (1984). Hall (1980a: 63) defines culture as the meanings, values, lived traditions and practices of social groups and classes which are built on the basis of historical conditions and relationships and through which people's understanding of the world is expressed. Williams (1997: 6) highlighted the evolving character of culture, calling culture 'ordinary' and defining it as the known meanings and directions to people as well as the new observations and meanings offered to and tested by people. In intercultural communication studies, E. Hall highlights the bonds between culture and communication and argues that 'culture is communication and communication is culture' (1959: 186). As regards society's culture or civic culture, scholars have maintained that 'civic culture points to...dispositions, practices, processes – that constitute the preconditions for people's actual participation in the public sphere, in civil and political society' (Dahlgren, 2003: 154). With respect to the role of new media and communications, Castells argues that culture shapes and is shaped by ICTs, becoming a 'real virtuality' that influences society through 'cultural codes' (1998: 367).

Reflecting the broadness of the notion of culture, the thesis tackles aspects of it which are helpful for explaining digital divides in Greece. More specifically, it explores ordinary people's everyday life culture and 'resistance culture'.¹⁰ On one hand, there are sociological approaches to technology that emphasise everyday settings of life and the related meanings, ideas, values and practices that matter for the adoption of media technologies (e.g. Bakardjieva, Silverstone, Berker, Haddon, Hartmann and others). On the other, empirical studies (Bauer, 1993, 1994 & 1995a) and works on the history of technology (Mokyr, 1990 & 1992) examine ordinary people's attitudes to technology and instances of 'resistance culture'. Regarding the Internet, Wyatt et al. (2002) in their typology of Internet non-users use the category of 'resisters'.

By selecting these two aspects of culture, the thesis aims to explore the following questions: how can different everyday settings of life influence people's

¹⁰ These theoretical perspectives are discussed in detail in Chapter 2.

decisions to adopt the Internet?; what are the specificities of everyday life that influence people's options to make effective use of the Internet?; how do everyday settings of life deal with people's negative predispositions to the Internet?; what is the joint effect of everyday life and resistance culture on specific parameters of Internet adoption?; why do these two aspects of culture matter when looking at the forces of Internet adoption?; how do these two aspects of culture interact with other forces in the information society?; what are the possible analytic drawbacks when excluding other aspects of culture from research?

Parallel to this, the thesis examines the role of official decision-making. Decision-making consists of policy and regulation which, although often used in the same framework, differ significantly.

Policy is 'a set of coherent decisions with a common long-term purpose(s)' (ILRI, 1995) and points to debates about the deconstruction of the legacy of the welfare state under the imperatives of liberty and independence (Calabrese, 1997: 20). In media and communications, policy has mostly been looked at from a political economy perspective (e.g. Melody, Mansell, Garnham, Smith and others), although Garnham's work introduced some cultural considerations to the field. The thesis argues that the focus needs to be not that much on the institutional mechanisms in policy-making, but rather on how policy 'products' and mechanisms reflect on, correspond to and are influenced by society's culture. In discussing digital entitlements, Mansell (2002) attempts this to some degree when she argues that social needs and cultural differences do not inform media policy to the extent they should as policy is surrounded by the rhetoric of the digital economy vision (ibid: 417).

Regulation is a more technical and complicated term. It represents the enforcement of policy decisions and visions by regulatory bodies through: (i) the presentation of rules and their subsequent enforcement usually by the state; (ii) any form of state intervention in the economic activity of social actors; or (iii) any form of social control initiated by a central actor such as the state and including all acts either intended to be regulatory or not. This last element is often seen as equivalent to governance (Baldwin, et al. 1998). In media and communications, regulation is discussed with respect to whether it jeopardises ordinary people's interests. The 'citizen and/or consumer' question goes beyond rhetoric and attempts to capture whether ordinary people are identified with the market and consumer's interests or are distinguished on the basis of regulatory provisions for inclusion, participation and citizenship (Livingstone et al., 2007). Regulation in media and communications is a blurry term and, although it impacts on market operation as well as on security and other conditions of technology usage, its role remains invisible to the user. The role of new media user and non-user in how regulation deals with exclusion and inequality in the information society remains equally unclear.

The thesis takes a sociological approach to policy and regulation. On one hand, critiques (Preston, 2005 & 2003b; Silverstone 2005; Mansell, 2002; Pauwels and Burgelman, 2003) to policy schemes in the information society inspire the present research to account for the role of policy in digital divides with concern to two issues: policy responsiveness to societal needs and requests, and the multi-layered influence of policy by visible or not cultural traits of society. On the other hand, the Sociology of Regulation tradition (e.g. Braithwaite, Slater and Slater and others) looks at regulation's social accountability in various regulatory domains and feeds, albeit not directly, the discussion of Internet regulation and digital divides. Also, works by the Centre for Analysis of Risk and Regulation (CARR)¹¹ touch upon dialogical and participative accountability mechanisms and the democratic responsiveness of regulation, going beyond technical regulatory regimes (e.g. Black, Hutter, Scott and others).¹²

However, no specific policy and regulatory domains are explored in the thesis. I aim to address the multi-dimensional role of policy and regulation in a flexible way and on the grounds of key actors' insights into this role and the dialogue of policy and regulation with society's culture. On one side, I am not interested in examining any specific domain of policy and regulation¹³ as I approach their role in digital divides looking in general at political mindsets and practices in the field. Of course, in order to review the role of policy and regulation critically I refer to some examples, cases or areas where policy and regulation act, without however examining any of these cases in-depth. On the other side, the source of knowledge is the discourse and perceptions of the key actors rather than some objective survey or observation of actual policies and regulations. The role of policy and regulation in digital divides is specifically evaluated according to what elite actors (Chapter 5) and ordinary people (Chapters 6-8) argue. In other words, policy and regulation are examined in more general terms and by drawing on elite actors/ordinary people's evaluations, since I cannot invest my efforts in observing both actual policies and regulations and key actors' reflections in detail over time. This research strategy aims at the same time to illustrate that policy and regulation are the domains where society's culture is formalised, filtered and transformed through and into decision-making processes.

Regarding the decision of the thesis to examine the interactions between society's culture and decision-making, literature on digital divides does not provide sufficient references to the linkages between society's culture and decision-making forces. Although some literature points in the direction of looking at the role of society in forming and developing policy and regulation and the cultural elements of the latter (Bennett, 2004: 485), empirical research should move further in this

¹¹ For more information on CARR research, see <http://www.lse.ac.uk/collections/CARR/>.

¹² These theoretical perspectives are discussed in detail in Chapter 2.

¹³ Only the survey in the second phase of the empirical research addresses specific policy and regulatory issues (e.g. Internet security and privacy) in order to approach respondents' attitudes more reliably.

direction. For instance, European research has only recently shown and relatively fragmentarily the possible linkages between decision-making and society's culture: 'EU policy discourses have played an important ideological [as well as practical, I would add] role in changing users' perceptions and in stimulating the purchase of ICT equipment and services' (Preston, 2005: 195).

1.4 *Significance of the research*

As noted above, the national contexts in which digital divides take place differ while divides evolve and acquire new meanings, requiring further study of the nuances underlying questions of access and use.

By looking at the role of everyday and 'resistance' culture and its linkages with policy and regulation in shaping Internet adoption in Greece, the thesis goes beyond the examination of economic, technological and infrastructural drivers of digital divides. It situates the phenomenon in a socio-political context, having the potential to feed other empirical research in the field. It can also be informative for national research since current ICT studies in Greece are mostly quantitative, neglecting questions of culture and culture's interactions with policy and regulation. Also, the thesis can constitute grounds for cross-national research as the insights obtained from the Greek case could become the research basis for other countries to be examined in a comparative perspective.

Finally, the thesis aims to provide policy recommendations that will inform civic organisations, policy-makers and regulators within and outside Greece about the key drivers and dynamics of the digital divides phenomenon. Although the thesis does not seek to provide any solutions to the phenomenon, the research insights obtained aim to allow a better understanding of the phenomenon by all stakeholders involved in the specific context of Greece and within the broader European framework.

1.5 *Research process and methodology*

In the first phase of the research, the study conducts an extensive literature-based examination of the key issues at stake. It thus addresses the research questions by exploring the following areas:

- a. The Greek information society in comparison to other European countries.
- b. The social, economic, technological, cultural, political and regulatory milieu in Greece; its importance and the implications for the country's information society.

In this phase, evidence of and discourses on digital divides in Greece and on the role of culture and decision-making are to be identified. Also, literature that argues about ‘anti-developmental’ public administration as well as ‘individualistic’ and ‘resistant’ culture of society in Greece is to be discussed and reviewed extensively.

The study then conducts a three-staged empirical research, drawing on both elite actors’ and ordinary people’s insights into the subject matter of the research:

a. In-depth individual interviews with elite actors: this provides an overview of the key traits of the Greek information society, filtering the broad conceptual framework of the research.

b. & c. Survey and follow-up focus-group interviews of Internet users and non-users in Greece: this allows a more focused exploration of the research questions. The employment of quantitative and qualitative means of examination seek to enable the exploration of multiple parameters that influence ordinary people’s decisions to adopt the Internet or not.

In the empirical research, the research questions are approached in a two-fold direction: first, through stakeholders’ (e.g. regulators, policy-makers, market-players and researchers) accounts of how the Greek information society has evolved over time; second, through ordinary people’s (Internet users and non-users) evaluations of the Internet, its role in everyday life, and the related policies and regulations. The thesis employs mixed methodology and collects data from multiple sources, aiming to complement and enrich the relevant findings as well as to compare and cross-validate the data collected throughout the research (for more on the methodology, see Chapter 4).

Finally, possible challenges and implications for the future of the European information society conclude the study, although they are not discussed extensively.

1.6 Thesis Outline

The thesis is structured as follows:

- In Chapter 2 the theoretical and conceptual framework of the research is presented and discussed.
- In Chapter 3 the Greek information society and its major traits with regard to digital divides are examined and discussed.
- In Chapter 4 the methodology of the research is outlined and the research design is presented in detail.

- In Chapter 5 the empirical findings obtained from interviews with elite actors are presented and discussed.
- In Chapter 6 the quantitative results obtained from surveying users and non-users of the Internet are analysed and reported through descriptive statistical analysis.
- In Chapter 7 the quantitative results obtained from surveying users and non-users of the Internet are analysed and reported through advanced modeling statistics.
- In Chapter 8 the empirical findings obtained from follow-up focus-group interviews of a sub-sample of surveyed individuals are presented and discussed.
- Finally, Chapter 9 provides a synthesis and a critical discussion of the empirical findings in light of other research in the field as well as in relation to the theoretical framework and research questions. In its conclusion, this last chapter discusses the research's contribution in the context of related work, its limitations and possible avenues for future research.

1.7 Conclusion

In summary, the thesis aims to contribute to the idea that we cannot view technological innovations as an autonomous field of living and working. People's attitudes to technology are a constituent of their lives and an extension of their multi-sided identities, with a big part to play in the ways in which technology is socially distributed and situated.

The thesis extends beyond non-contextualised accounts of technology access and use, aiming to investigate Internet adoption within everyday life contexts and under the operation of policies and regulations. It also questions the focus on socio-demographic forces of divides, yet without entirely disregarding their importance. Although other digital technologies could be looked at and other perspectives taken into consideration, the thesis looks at the role of society's culture and decision-making in Internet adoption in Greece under the influence of the general idea of the 'social embeddedness of technology' (Warschauer, 2003b).

How can digital divisions be explained within a complex and rapidly changing socio-economic and political environment where technological development is taking place? The literature review that follows attempts to address theoretically and to contextualise such a 'big' question, narrowing down the principal research questions and paving the way for their empirical study.

2 Theoretical and conceptual framework

2.1 *Chapter overview*

This chapter sets out the theoretical and conceptual framework of the thesis. It provides a critical account of the literature on digital divides and draws on the role of society's culture and decision-making in particular. It thus paves the way for understanding how the issues arising in the literature frame the conceptual foundations of the thesis, thereby driving its methodological and empirical directions.

The chapter presents a general-to-specific flow of discussion and is structured as follows. Section 2.2 sets out the conceptual foundations of the present research. Section 2.3 highlights the dominant discourses on digital divides and introduces the two key concepts of society's culture and decision-making. Section 2.4 looks at general socio-cultural accounts of technology and argues for the value of everyday life traditions and studies that explore cultures of resistance to technological artefacts. Section 2.5 discusses decision-making in the information society and in relation to digital divides. It discusses policy and regulatory models and reviews their approaches to the development of new technologies in diverse socio-cultural contexts from a sociology of policy and regulation perspective.

The chapter concludes with Section 2.6 that outlines the conceptual framework within which the empirical part of the study is situated. The thesis narrows down the principal research questions introduced in Chapter 1 and links to Chapter 3, where a country report of digital divides in Greece is presented. It also links to Chapter 4 where the research methodology is set out and the research questions are operationalised in order to be pursued empirically.

2.2 *Conceptual foundations: a general account and a specific example*

The conceptual foundations of the thesis are set by literature discourses on society's culture and decision-making in the information society and as far as digital divides are concerned. The thesis espouses literature that takes into consideration the complex picture of society's culture in the information society as well as claims about the connections between society's culture and decision-making. It calls for critical thinking on these connections, pointing to the power relations between politicians or

regulators and ordinary people (Murdock, 1997: 81) in the information society as well as to the complex association of digital divides with other social divisions, as illustrated in Section 2.3.3.

In order for the reader to comprehend the links between society's culture and decision-making and their influence on digital divides, a contextualisation of these three concepts is needed. First, I examine digital divides and, more specifically, aspects of Internet adoption, associating them with individually- and system-driven parameters of social life and exclusion. Also, I argue that society's culture and decision-making are constituents of social reality and influence social life in general and, as such, play an important role in shaping digital divides. Second, I examine society's culture and I argue that people's needs, desires, conceptions and dispositions vary. People living in different cultural contexts are very likely to express different attitudes to the messages they receive and to new phenomena that arise. Given that technology design, infrastructure, services and content aim to correspond to human needs and desires, it is more likely that different cultural contexts take advantage of technology differently rather than technology being perfectly adjusted to such contexts. Third, as regards decision-making, I argue that welfare or neo-liberal policy and regulation models play a role in people's inclusion, involvement, participation and citizenship overall, being either in tune with or in contrast to specific elements of society's culture. The ways in which decision-making is associated with everyday culture and instances of a resistance culture in Greece in particular are examined empirically in the thesis.

The example of EU policies and regulations for the information society and the critiques they have been subject to illustrate the need to link society's culture and decision-making in the information society. The vision of a European information society has been framed by specific and evolving political initiatives and regulatory settlements.¹⁴ The 1993 White Paper and subsequent documentation¹⁵ have presented the advent and dissemination of the information society as unavoidable and natural (EC, 2003: 23). Thus, only its positive effects in the economic and business life of Europe have been brought up, overlooking difficulties that arise from the diversity and inconsistency of development in the European regions involved. In this techno-enthusiastic spirit, the EU policy and regulatory strategy for the information society is marked by the following principles: 'cutting red tape', including the faster entrance of enterprises in new markets; 'technological neutrality' to achieve the necessary flexibility when dealing with emerging technologies and their convergence; 'light regulation', according to competition principles; and 'consistency across the European

¹⁴ The 1993 European Commission White Paper *Growth, Competitiveness, Employment: The Challenges and Ways Forward into the 21st Century* articulated the vision of a European Information Society for the first time.

¹⁵ The follow-up document that put in place a specific action plan for realisation of the European Information Society was the Bangemann plan in 1994.

market' so that the establishment of a single and unified market is attained (DG Information Society, *Overviews of the European Union activities: Information Society*).

These principles are largely reflected in the EU electronic communications regulation established in 2003, illustrating the essential detachment of decision-making from the mass of ordinary people in Europe. Although the policy initiatives and regulation in the EU envisage the creation of a European information society for all, scholars such as Mansell and Steinmueller (2000) predict the advent of negative effects which would be overcome through social regulation only. Instead of the deterministic vision of a uniform European information society, the national and local distinctiveness of the EU member states arise as an intervening factor that draws a diverse and differentiating picture of the information society across European borders: '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' (ibid: 18). Such differentiations and their economic, cultural and societal grounds are to be understood as influential parameters for the course of the information society in Europe and, therefore, as indicators that matter for decision-making in the field.

These discourses and critiques are discussed in more detail in Section 2.5.3 as the EU (or Europe, although not a synonymous term) is the broader context within which the Greek information society is situated and influenced by. In Section 2.3, a more focused discussion of digital divides and relevant literature discourses paves the way for understanding how and why society's culture and decision-making parameters matter.

2.3 *Digital divides and social exclusion: a dialogue between technology, society's culture and decision-making?*

The conceptual framework of the thesis first draws on general literature that presents digital divides as embedded in a wider social context in which various forms of social exclusion exist. Section 2.3.1 discusses how digital divides are conceptualised in the literature. Works by Norris, Selwyn, Livingstone, van Dijk and Rogers feed this discussion. Section 2.3.2 presents dystopian and utopian approaches to the present and future status of digital divides, noting the implications for measuring the phenomenon. Section 2.3.3 discusses the association between digital and social divisions and the implications for all domains of social life. Here, the discussion draws on the works of Couldry, Mansell, Selwyn, Cammaerts, Loaders and others, shedding some light on the role of society's culture and decision-making in shaping digital divides.

2.3.1 *Conceptualising digital divides: a shift from 'exclusion' to 'inclusion' and from quantitative to qualitative rhetoric?*

A worldwide debate has taken place over the last two decades about digital divides and their constituents, as well as their dimensions and variations in the different contexts in which they emerge.

Scholarly works have seen digital divides as a dichotomy between the 'information haves' and 'information have-nots' (Wresch, 1996) or, in economic terms, the 'information poor' and the 'information rich', lacking 'sociological sophistication' (Webster, 1995: 97). Well-known works (Roger, 2001 & 1995) have espoused narrow and quantitative accounts of divides, overlooking qualities of diffusion and the contexts where diffusion takes place. The dominant rhetoric on the phenomenon has looked at the split between use and non-use, as well as at economic and easily quantifiable drivers of divides such as socio-demographics. A volume of studies has supported linear and arbitrarily predetermined causal relations between socio-demographics and divides, understanding the phenomenon as 'the differential access to and use of the internet according to gender, income, race, and location' (Rice, 2002: 106).

In empirical research, early studies argued that Internet users drop-out due to non-affordable cost and a lack of skills (Katz and Aspden, 1998). Later, Katz and Rice (2002) confirmed this conclusion by presenting Internet dropouts as primarily younger and less educated people and secondarily as people with a lower income and being less likely to be married. Also, recent studies such as the Australian national survey conducted in 2005-06 (Australian Bureau of Statistics, 2006) provide non-contextualised accounts of digital divides, mainly relying on access, use, demographics and infrastructural indicators. Even more recent studies (Chinn and Fairlie, 2007) talk about the role of economic, demographic and infrastructural parameters, ignoring socially embedded indicators that assign a range of qualities to divides.

Although no single and universally accepted indicator can be espoused when researching digital divides (Vehovar, et al., 2006), quality of access and use as well as contextual indicators are needed for a systematic account of people's engagement with technology (Selwyn, 2004a: 351; Couldry, 2003: 96). Today, a growing volume of literature criticises dichotomies and quantifications of digital divides, shifting the conceptualisation of the phenomenon. The term 'digital inclusion' is now used as an alternative to that of 'digital exclusion' and more emphasis is increasingly placed on the various qualities of inclusion and exclusion. This progression raises issues of quality and levels of technology use as well as issues of attitudes to and usage of digital technologies, going beyond numbers of people who access and use such technologies. A brief presentation of the history of discourses in the field will describe this progression more illustratively.

More specifically, the diffusion theory emerged in the 1950s and 1960s, while diffusion theory works such as those by Rogers (1995) influenced the initial theorisations of digital divides in the 1990s. As commentaries have shown (Bradbrook and Fisher, 2004; Selwyn 2003, 2004a & 2004b; Warschauer, 2003a), diffusion theory presented a limited conceptualisation of digital divides as it argued that the acquisition of and access to computers and Internet equipment is a fundamental criterion for overcoming divides. Following diffusion theory, a more popular thesis was articulated, maintaining that access to ICTs does not eliminate divisions and exclusion from digital opportunities. Thus, from 2000 onwards scholars such as Norris (2001) have presented a more complex picture of digital divides, discarding the dichotomy between haves and have-nots and taking the quality and efficiency of technology use into account. Works on how increased access might maintain or exacerbate existing divides have increased in number. Also, different degrees and qualitative aspects of divides concerning material, economic, social, cultural and technical forces that mediate access to and use of technologies, such as the Internet, have become objects of research (Livingstone 2002).

The literature is increasingly opening up the discussion to include more forces and allowing more middle-way positions, suggesting a 'thicker description of the various shades of information and telecommunications inequalities' (Wilhelm, 2000: 69-70). Scholars such as Selwyn (2004a: 347) have argued that content and resource divides matter and that access does not determine the existence of divides. Parameters of social, cultural and educational quality influence the capability of an individual to use digital technologies, attributing more nuances to the concept of access itself as well as to the effective usage of technology through requisite skills, knowledge and support (van Dijk 1999).

Thus, skills and motivations have become increasingly important indicators in empirical research, even in countries where not much research and technological development exists. For instance, Estonian experts (Kalkun and Kalvet, 2002) identified three main types of barriers to digital inclusion in Estonia: first, a lack of motivation; second, non-users' unwillingness to obtain new skills due to their psychologically complicated sense of use whereby issues of language, learning, hardware cost and accidentally harmful online behaviour matter; and, third, non-users' dismissal of lifelong learning. One can conclude that, in this case, people's attitudes to and skills in technology usage matter significantly, challenging simplistic accounts of digital exclusion.

As a result, 'digital inclusion' has been proposed as an alternative concept, highlighting variations particularly in Internet usage. In Livingstone and Helsper (2007), such variations are presented as gradations in digital inclusion, while the authors suggest that research should be refocused on the physical, digital, human and social forces that influence the social integration of ICTs. The authors employ 'a

continuum of use' (ibid: 682) where gradations of use allow the detection of inequalities in use, the exploration of the efficiency and benefits of use, as well as the identification of the reasons underlying non-use. Their idea of a staged process of going online (ibid: 683) paves the way for researching digital inclusion in connection to the various systemic factors that influence gradations of use. Similar conclusions are reached in accounts that suggest a hierarchical definition of digital divides, with access to technology in various contexts resulting in varying levels of engagement and consequences (Selwyn, 2004a: 351).

This graduated approach constitutes a conceptual progression in the sense that it distinguishes the types of capital that people have at their disposal, as well as the ways that different forms of capital influence people's abilities, willingness and effectiveness regarding ICT usage. Factors such as material resources and economic capacity, socialisation in the dominant culture, skills and awareness of the prevalent techno-culture, as well as social networks, are all forces that shape our understanding of digital divides (ibid: 352-5). Thus, more and more scholars attempt to approach digital divides beyond access and use issues. Skills, knowledge, literacy, capabilities and breadth of use (van Dijk, 1999: 153; Mansell and Steinhüller, 2000: Ch.2; Livingstone, 2007) or engagement with technology, and cultural, societal and economic parameters (Selwyn, 2004a) have now become the prevalent areas of concern in the digital divides literature.¹⁶

However, the above conceptual progression is still quite limited and the literature has hardly touched upon the interconnections between ordinary individuals and political agencies in the distribution of diverse forms of capital.

2.3.2 *Digital divides: 'dystopian' vs. 'utopian' debates and findings. Implications for measurement*

Two camps have marked the research on digital divides: one espousing 'dystopian' views and the other adopting 'utopian' approaches. A similar distinction can be made with respect to the methods of researching and measuring digital divides.

On one hand, the existence of digital divides has been denied. In Compaine's words, new media technologies have been considered 'crucial factors in the spread of both access to information and the skills to use information' (2001b: 109). The 'utopian' perspective, expressed in Clinton's political planning for wiring all American schools by the year 2000, sees the steps taken as contributing to realisation of a vision of an information society where everybody has a role to play. In this respect, 'the

¹⁶ Others even challenge the 'truth claim' (Carpentier, 2003: 104), asking whether digital divides exist and what their extent and shape is 'on empirical, conceptual, ideological and epistemological grounds' (ibid: 114).

phrase “digital opportunity” has lately replaced “the divide”, putting a blandly positive spin on all things computer related’ (Strove, 2003: 274).

On the other hand, Hacker and van Dijk argue that this phenomenon ‘grows[s] and come[s] on top of old inequalities of income, education, age, gender, ethnicity and geographical location’ (2003: 321). The ‘dystopian’ thesis, in Katz and Rice’s words (2002: 6), ‘...says that the digital divide between socio-demographic groups is worsening and that unequal access to digital information and communication technology...hurts already disadvantaged minorities...’. According to this argument, the information revolution signifies a new danger, a new condition of enslavement, and Ide (1980: 40) asks whether ‘information revolution may effectively enslave rather than serve people?’. Besides, an increasing number of works acknowledge that digital divides is a complex phenomenon that ‘is marked not only by physical access to computers and connectivity but also by access to the additional resources that allow people to use technology well’ (Warschauer, 2003a: 6). Thus, it is recognised that the digital divide concept depends heavily upon ‘the multifaceted concept of access’ (Hacker and van Dijk, 2003: 315) and that the multiple dimensions of access constitute serious barriers to inclusion.

The controversy between the ‘dystopian’ and ‘utopian’ theses has been approached by empirical studies that apply different measures or methodologies, thus producing contrasting findings. On one hand, scholars such as Hacker and van Dijk stress the ‘relative differences between categories of people’ (ibid: 321). They draw on surveys such as the US Census Bureau, 1984, 1989, 1993, 1997 and 2000, as well as the NTIA’s findings in 2000, which all show that in the 1980s and 1990s digital divides expanded in relation to varying resources – material, social and cognitive (ibid: 321-323). In line with this view, media imperialism scholars such as Schiller (1996) view information inequality as being additional to inequalities of education, income, ethnicity, gender, social class and occupation, emphasising the contribution of demographic differences to the formation of digital divides (Browning, 1996: 77). On the other hand, researchers like Morrisett (2001: ix) argue that the existing informational gap will be weakened due to ‘steadily decreasing costs of use and steadily increasing ease of use’. This argument essentially relies on empirical findings in the USA (Nie and Erbring, 2001; National Public Radio, Kaiser Family Foundation, and Kennedy School of Government, 2001; Cheskin, 2001). These findings maintain that gaps are shrinking and excluded groups are gradually less excluded as market and technological indicators increasingly improve.

An example of empirical research that is split between the ‘dystopian’ and the ‘utopian’ positions is the British Telecom study (2004) in the UK. This study discusses the social impact of digital divides and reports on ten interviews with experts. These experts were categorised into ‘digital optimists’ and ‘digital pessimists’ with regard to the degree of optimism they expressed about the closure of divides in the future and

the interaction between technological and social exclusion. Thus, some argued that divides will be eliminated in the future while others believed that such divides will be maintained and exacerbated, obtaining new forms and qualities

Katz and Rice (2002: 13) attempted to bridge the gap between the 'dystopian' and 'utopian' positions by proposing the 'syntopia' thesis. They talked about 'a persistent but declining digital divide' (ibid: 39), as 'for some dimensions of the digital divide – especially income and age – there is still a long way to go before the digital divide disappears' (ibid: 322). They addressed the existence of digital divides, as well as whether the differences in possession and use of ICTs entail deprivation and social inequality, suggesting that we need to consider not only the immediate effects on the occupation of social franchises but also ICTs' symbolic value as a parameter of social differentiation and inequity.

Although this 'syntopia' thesis overlooks the political and regulatory aspects of digital divides, it is close to the aim of the thesis to explore the complexities between technology, culture and decision-making. Dynamic and complex digital divides challenge one-dimensional and non-contextualised dystopian or utopian arguments. What is needed is a synthesis, namely a 'syntopic' conceptualisation and contextualisation of digital divides so that the ambiguity that surrounds them is disclosed.

2.3.3 Digital divides in the context of social divides: implications for a socio-cultural and decision-making approach

Most of the above discourses about the nature and extent of digital divides tackle various aspects of divides by relating them to social exclusion.

Debates on digital divides are concerned with the impact of these divides on the distribution and effective use of communication resources and power (Wilson, 2000), namely with the impact on social exclusion. Looking at causality, ICTs are often deterministically perceived as influencing social marginalisation (Loader and Keeble, 2004: 37). Scholars argue that 'being disconnected, or superficially connected, to the internet is tantamount to marginalization in the global, networked system' (Castells, 2001: 269). Also, recent empirical research has argued that digital exclusion is the result of social exclusion and further deteriorates socially exclusionary mechanisms (UK Online, 2007). Dekkers (2003) illustrates the correlation between pre-existing poverty and low diffusion of ICTs. On the other hand, there are those who argue that the Internet does not have the potential to influence economic deprivation and social disparities substantially: 'the world has always been a place of haves and have-nots and I can see no way that internetworking is going to change this very much' (Haywood, 1998: 25).

The emphasis placed on easily measured economic and technological drivers of digital divides seems to go hand-in-hand with normative assumptions about the importance of technology diffusion and the extent to which it ‘must not create an information underclass’ (Bickerstaffe, 2001: 104). Relatively little attention has been paid to the complex role of human resistance to and mediation in digital inclusion or exclusion; mediation that holds important implications for people’s social inclusion and participation overall. The literature considers society’s culture not as a primary factor, but as one of many factors that influence the participation of ordinary people in the information society: ‘...lack of financial resources, knowledge, skills, or “cultural capital” is said to prevent them from benefiting from ICT developments...’ (Frissen, 2003: 20). Likewise, dominant policy discourses often stick to the discontinuity paradigm, claiming that technological evolution has no links with structural, contextual or historical factors (Cammaerts, 2005: 73), thus guiding research to normative choices about the role of the state, the market and the position of the public interest (ibid: 75).

Although, as discussed in Section 2.3.1, the notion of digital inclusion constitutes some progression in the study of mediating systemic factors, the relationship between digital and social exclusion is understood overall in a linear way (Cammaerts and Audenhove, 2003a). This linearity partly consists of the argument that technology domination can change the landscape of social exclusion. This argument largely overlooks the role of socio-cultural and political capital and the importance of their connections for how people adopt ICTs and for the implications for social exclusion.

From a socio-cultural perspective, early research found that ordinary people can feel uneasiness with the cost and the ‘disruptive’ function of telephones (Haddon, 1994), with the content of television programmes (Haddon and Silverstone, 1995a) and with the ‘addictive’ character of the latter (Lodziak, 1986). Also, people often view ICTs as technologies that transform social networking, replacing the familiar face-to-face social interaction (Haddon and Silverstone, 1995a). In his research on single parents and young elderly, Haddon showed that priorities and horizons in life matter, as ‘non-adoption is based on values and priorities’ which depend upon people’s biography and socio-cultural background (2000: 402). People’s needs, cultural background, customs and everyday life have been raised by some research as parameters that generate divergent evaluations of ICTs and the Internet in particular. From this perspective, Wyatt et al. (2002) emphasise self-exclusion and the existence of ‘Internet resisters’.¹⁷ In addition, Ofcom (2004) and OxIS show that a lack of interest is a significant parameter of Internet non-usage, with 46% of non-users in the UK being not interested in using the Internet (Dutton and di Gennaro, 2005: 53). This raises the issue of digital choice rather than that of digital exclusion, with OxIS 2007

¹⁷ Wyatt et al. refer to a ‘potential gap between heightened expectations and the reality of the “internet experience”’ (2002: 33) as one of the causes of dropping-out.

arguing that the Internet has become an 'infrastructure of everyday life' (Dutton and Helsper, 2007: 8).

Attempting to move beyond these initially useful insights into everyday cultures and their role in ICT and Internet adoption, research has largely failed to extensively tackle the deeper role of everyday and resistance cultures in people's decisions to adopt certain technological artefacts. For instance, the 'Internet and Daily Life' Pew survey (Fallows, 2004) provides an extensive discussion of the integration of the Internet into American users' everyday lives, failing to look at non-users. In this study, the everyday is viewed only as a 'recipient' or 'reflection' of people's decisions to use the Internet. It is not seen as a possible driving force of such a decision or as a space where offline and online activities interact, influencing the Internet experience and the overall quality of living. Also, this Pew study examines the role of the Internet in users' daily lives mostly from an 'online activity' perspective and fails to capture people's perceptions, views and attitudes to technology, as well as the role of everyday life in Internet adoption and quality of Internet use. Another, more recent Pew Internet survey (Horrigan and Rainie, 2006) attempts to examine the role of the Internet in people's major moments of life by looking at the Internet's role in eight everyday occasions only. However, what I argue is that every person has different priorities in life and, therefore, the consideration of a moment being 'major' varies among people and cultures. On the other hand, a qualitative study (Kvasny, 2006) in the USA conducted interviews with IT trainees at a Community Technology Centre in a low-income neighbourhood of a major American city in order to gain insights into the trainees' views of how technology training had made a difference to their lives. This study looked at the role of culture in reproducing digital inequality and argued that 'culture is useful for understanding how groups conceptualise, use, and react to ICTs (ibid: 166).

From the point of view of political capital, the emphasis is placed on the direct role of policy-making and regulation in guaranteeing inclusion and in fighting against exclusion, whereas the interconnections with socio-cultural and other systemic parameters remain under-explored. Ordinary people's positions in the system and policy provisions for the empowerment of citizenship are increasingly linked to the ideas and practices of the information society (Mosco, 1999: 36). Digital divides discourses draw the attention of politics to inclusion and the implications for ordinary people and public life, raising matters of people's empowerment and power relations (Silverstone and Sorensen, 2005: 216). Thus, debates on welfare and the neo-liberal state and on how policy should deal with issues of inclusion, social rights and participation acquire fresh interest today.

Couldry (2003) looks at digital divides from an empowerment perspective and in a later contribution (2007) he attempts to take this argument further, stressing the

importance of digital divides for democracy.¹⁸ Thus, he (ibid: 93) and others (Stevenson, 1999: 33; Murdock and Golding, 1989; Schudson, 2003; Wilhelm, 2000) argue about the significance of digital inclusion for democracy and people's empowerment. In this spirit, Mansell (2002) points to the implications of digital divides for democracy. She critically reviews the market-tuned policy-making in the information society as well as dominant media configurations that undermine the establishment of a new 'publicness' that would be addressed to the majority of people. Mansell suggests that what is needed is people's empowerment through the substantial facilitation of their 'capabilities' and the acquisition of new media literacies.

These authors, as well as Castells' early point that 'outside the media sphere there is only "political marginality"' (1996: 312), take, at least partly, a linear and normative perspective.¹⁹ In this sense, I agree with Loader's (1998: 3) early criticism that most of the literature understands the relationship between ICTs and society as linear, and with politics being perceived as influencing digital divides in a one-dimensional way. ICTs are still presented as fundamentally transforming societies and constituting the foundation of democracy and people's empowerment. The uneven and unequal ICT diffusion is considered critical for the shrinking or widening of other disparities, while the ways in which socio-cultural and political patterns of organisation separately and together influence the take up and use of technology and its social impact have, wrongly, drawn only little attention.

Only limited research literature provides some insight into this direction. For instance, ethnographic interviews of 70 Internet users and non-users in 20 family groups in the USA (Clark et al., 2004) provide an account of the everyday micrographics of digital divides, looking indirectly at policy-making from the perspective of ordinary people. Also, the study of digital divides in South Africa (Khumalo and Sibanda, 2006) highlights the role of decision-making from a gender and geographical perspective. Khumalo and Sibanda interviewed 64 groups of 10 women per group across four districts in South Africa and explored the disadvantaged position of women in rural areas with regard to their access to and usage of ICTs. Although this study has certain methodological flaws (e.g. excessively structured topic guides), its conclusions help one understand how decision-making may reflect society's culture, guaranteeing inclusion for certain groups of the population only (e.g. males in urban areas of South Africa).

The quite limited research literature that looks at both society's culture and decision-making to account for digital divides indicates the need for a careful and

¹⁸ Couldry's account is a recent attempt to discuss Sen's capability approach in media and communications. Mansell's work in 2002 and Garnham's initial attempt in 1999 constitute earlier attempts to employ Sen's framework.

¹⁹ We should be sceptical of Couldry's and Mansell's accounts that approach engagement with technology and the quality of technology usage from a 'capability' perspective. Capabilities are presented as attributes that are easy to measure and isolated from other contextual forces.

systematic exploration of the ways in which people's values, evaluations, competencies and potential are interconnected and influenced by individual internal forces, as well as by institutional and systemic factors. For example, close dependencies of participation mechanisms on systemic structures might appear (Mansell and Steinmueller, 2000: 97), with ordinary people dissociating and excluding themselves and with decision-makers and other minority groups taking over both institutionally and psychologically.

As regards the excluded ones in particular, Loader and Keeble remark that a more 'grassroots perspective' is now needed: 'whilst excluded communities and individuals are unable or reluctant to use the technology, their identities and cultures remain invisible' (2004: 35). An early qualitative study (Haddon, 1999a) in five European countries merely scratched the surface of the possible role of cultural differences between the five countries. It questionably showed that, even at the early stage of Internet diffusion, European countries with different socio-economic and political characteristics presented a quite coherent picture of Internet adoption. A 'grassroots perspective' should go deeper. It should shed light on the complex relationships between ICTs and multi-sided social exclusion as well as on the illusive nature of discourses which argue that digital inclusion can effectively eliminate social exclusion and marginalisation. Also, reasonable theses such as Selwyn's suggestion (2004a: 351-5) that social and cultural capital along with economic and technological assets are mediating factors in shaping people's engagement with ICTs should develop a more complex and dynamic picture of how digital divides are socially and politically contextualised. Digital inclusion is not a solution to the multi-dimensional problem of social exclusion and it should be seen as a facilitator in some instances and as a result of policies that aim to fight other structural aspects of social exclusion in other instances (Cammaerts et al., 2003: 304).

In concluding, I propose a theorisation of digital divides that emphasises the critical role of socio-cultural and decision-making dynamics in structuring Internet access and use in both qualitative and quantitative terms. I propose a theorisation according to which a web of cultural traits in a society, with their own gaps and disparities, as well as policy and regulation dynamics, are in a constant dialogue with technology, together influencing social inclusion and participation. In Section 2.4 and 2.5 the socio-cultural and decision-making forces of ICT adoption and the dialogue between them are discussed.

2.4 The social embeddedness of technology: digital divides and the forces of everyday life & ‘resistance culture’

This section presents the socio-cultural perspective of the thesis. Section 2.4.1 introduces the argument of the social embeddedness of technology, indicating its significance for understanding digital divides. A more focused examination of socio-cultural forces of digital divides follows, examining the notion of everyday life in Section 2.4.2, and that of ‘resistance culture’ in Section 2.4.3. The discussion of these two socio-cultural parameters drives the discussion in Section 2.4.4 to relate society and its culture to decision-making. This paves the way for Section 2.5, where the perspective of decision-making is discussed in detail.

2.4.1 The social embeddedness of technology: determining digital divides?

The importance of technology design has been raised by key scholars (McLuhan, 1964; Lin and Comford, 2000; Latour, 1999) and supported by the argument that ‘technologies would unravel social difficulties by opening up new avenues of information’ (Marvin, 1988: 66). Techno-enthusiasts often articulate utopian views about the future of societies that enter the information era.²⁰ They support a-social accounts of social and economic power relations in the information society (Loader, 1998: 7), maintaining that the empowering potential of ICTs can be fulfilled as soon as people are given computer equipment and training (Loader and Keeble, 2004: 39). Communication is taken to be a highly mediated process and ICTs are considered to play an important role as mediators that impose certain meanings through mediating communication processes (Silverstone, 2002: 762). In this sense, ‘technology matters’ (Mackenzie and Wajcman, 1999: 18) and design defines the scope or potential of use (Cawson, et al. 1995; Winner 1993 & 1999). Along these lines, the Cultural Lag hypothesis (Ogburn, 1922) argues that societies change more slowly than technology. With regard to the Internet, much has been said about its potential to operate as a ‘powerful predictor of democracy’ (Kedzie, 1995), with Werbach (1997: 84) arguing that ‘the endless spiral of connectivity is more powerful than any government edict’.

Technological determinism and McLuhan’s declaration that ‘the medium is the message’ (1964) are juxtaposed with user-oriented and socio-centred approaches (Haddon, 2005). A number of traditions emphasise the socio-cultural embeddedness of technology, including: Social Construction of Technology; Feenberg’s Critical Theory of Technology (Feenberg, 1991, 1995 & 1999); cultural and linguistic studies (Woolgar

²⁰ Indicative is Bangemann’s argument that ‘the first countries to enter the information society will reap the greatest rewards. They will set the agenda for all who must follow’ (1994: 4).

and Grint, 1997); Schutz's Phenomenological Sociology and 'lifeworld' (Schutz, 2003; Schutz & Luckmann, 1974), and Levebvre's Critical Theory (Levebvre, 1991).

Indicatively, the Social Construction Of Technology (SCOT) (Pinch and Bijker, 1987; Bijker and Law, 1992; Bijker, Hughes and Pinch, 1987; Latour, 1987) argues that technology is socially shaped. The concepts of 'relevant social groups' and 'interpretative flexibility' of technological artefacts (Pinch and Bijker, *ibid*: 27) constitute its main conceptual equipment. The SCOT departs from the a-social account of the 'impact' approach, claiming that 'relevant social groups' adopt divergent meanings of technology and that technology exhibits 'interpretative flexibility'. Social constructivists argue that certain interpretations and meanings are accepted at the end only, determining the design of an artefact which finally 'stabilizes' its shape and function, and comes to a closure – albeit a provisional one (*ibid*: 44). By fighting technological determinism, the SCOT situates social actors at the core of the process of technology creation and attributes power to the notion of the 'social shaping' of technology.

In approaches that adopt the argument of the 'social embeddedness of technology', 'social usability' (Sotamaa, 2005), or the 'cultural industry' (Haddon, 1999b: 326), the user operates as an 'active contributor to the shaping of technology' (Bakarjieva, 2005: 9). Also, attention is paid to the role of media literacy and cultural identities, with some arguing that these factors make the mediation process highly dialectical but at the same time severely uneven and divisive (Silverstone, 2002: 762). Studies on the importance of the socio-cultural milieu for ICTs (SevenOneMedia, 2002; Cathelat, 1993; Mediagruppe, 2000; Klamer et al., 2000) look at sub-cultures or groupings of culture among various social and cultural groups. For instance, studies on the social values of openness (Rogers, 1995; Thomas, 1995; Hofstede, 1980; Trompenaars, 1993; Mante, 2002; Thomas and Mante-Meijer, 2001; Smoreda and Thomas, 2001) try to make sense of the various ways in which such values influence the use, adoption and integration of ICTs by and into particular socio-cultural milieus. Also, historical accounts give an overview of how society-driven factors influence technological change (Flichy, 1991; Winston, 1998; Williams, 1975).

Such socio-cultural studies challenge techno-determinist streams in theory and research, and present the 'divide' question as inherent in 'computer culture'. In this sense, the architecture, ideas and content-embracing computer technologies reflect the deep social conditions within which those technologies were set up and developed (Streeter, 1999). Also, people's needs, desires and preferences in the cultural and social settings in which people live determine engagement with technology and consequent instances of digital exclusion or inclusion (Mansell and Steinmueller, 2000: 38). Technology and the supply of infrastructure or services are not sufficient prerequisites

for the achievement of digital inclusion since providing people with the potential for engaging and participating in the information society are critically important.

Opposing technocratic views that consider the information society revolutionary and civil society a banal social formation of the past (Guedon, 2003), approaches to social embeddedness of technology examine the role of human actors as appropriators of or resisters to technology. Here the emphasis is not on design, advertising, marketing and other issues of technological development. 'Society and technology are *recursively* linked in complex ways' and the 'technology-impact-society effect model' is obviously not valid (Graham, 1995: 55).

The concepts of 'everyday life' and 'resistance culture' deserve more attention though, as the thesis employs them for the empirical exploration of digital divides in Greece. Section 2.4.2 considers Schutz's perspective of the 'lifeworld' and the example of EMTEL's work on ICT adoption in an everyday life framework. Then, Section 2.4.3 discusses the notion of 'resistance' and its role in the adoption of ICTs, with the emphasis on the foundations of Bauer's work.

2.4.2 *Everyday life and digital divides: Schutz's 'lifeworld'*

Everyday life and the study of digital divides

Everyday life studies constitute a conceptual and research advancement. They view the cultural elements of everyday life as highly interconnected with people's experiences with technology, allowing digital divides to be seen as associated with socio-cultural contexts of life:

Our answers...must recognize the significance of cultural differences and the inequalities of access to the symbolic and material resources ...[they] must take into account the specificity of the individual and the local as well as the generality of the national and the global. They must understand, finally, the particularity of information and communication technologies, which are central to the conduct of everyday life... (Silverstone, 2003: 5).

What is the 'everyday'? No matter how fundamental the concept of everyday life appears to be, its commonality is a problem as '...it is very difficult to grasp – and hence research – the unspeakable and/or unquestionable, the taken-for-granted, which the everyday is seen to represent' (Hartman, 2007: 1). Thus, it is recognised that it is not easy to define the 'everyday' (Featherstone, 1995: 55). Others criticise the currently dominant forms of attention to the 'everyday', arguing that 'the everyday doesn't have a form of attention that is proper to it' (Highmore, 2002: 161).

In more analytical terms, the notion of everyday life poses a range of questions with respect to digital divides, reflecting certain options and possibilities that the researcher has. The following table provides a list of answers to possible questions in

the everyday life framework of research, indicating the different possibilities available to the researcher:

Table 2-1: Everyday life framework

Everyday life questions	Everyday life answers
What level of everyday life: the micro- the meso- or the macro-level?	The meso- and macro-level go beyond 'home' and domestication of technology, looking at social groupings within society. The individual is perceived as part of the social, being influenced and influencing society's culture through engagement or resistance.
Which parameters and actors are looked at when taking an everyday life approach to digital divides?	The parameters of resistance, integration or engagement can be looked at with respect to the Internet and other digital technologies. Consideration of other parameters external to the individual (e.g. decision-making) may also be useful.
When do we need to look at everyday life to explore phenomena such as digital divides?	When forces of the phenomenon under exploration can be situated in people's everyday settings of life.
What is the 'quality' of the everyday? Is it also 'quantifiable'?	Quality depends on the context in which everyday life is examined. On the other hand, quantifications cannot be excluded, although they may raise some problematic issues as the everyday constitutes a quality.
Is everyday life something users understand as such or is it something different?	It is hard to say; what matters is the clarification of whether the research explores users' understanding of everyday life or actual everyday practices.
Should everyday life and its role in technology adoption be looked at from a user or non-user perspective?	It can (and should sometimes) take both perspectives so as to support the argument that everyday life plays a role in people's decisions to use technology.

From the above list of questions and respective answers, it becomes obvious that the thesis is not interested in individual everyday life and its uniqueness. It instead looks at shared meanings and settings of everyday life within the broader context of a country. The concept of 'domestication' (Silverstone and Haddon, 1996b; Silverstone and Hirsch 1992; Silverstone, 1994) and the argument that the study of ICTs does not end in people's decisions to buy them, as 'domestication' takes place through 'taming of the wild and a cultivation of the tame' (Silverstone, 1996: 223), hold a certain value in the context of the present research.²¹ However, my understanding of the everyday is closer to Schutz's 'lifeworld' and to the argument of phenomenological sociology.

Schutz's 'lifeworld' and the study of digital divides

An important contribution to studying technology in a social framework comes from phenomenological sociology. Phenomenological sociology builds its argument on the grounds of intersubjective communication and interaction where socially

²¹ For other domestication studies, see: Silverstone and Hirsch, 1992; Silverstone and Haddon, 1996a; Haddon and Silverstone, 1994; Haddon, 1994.

constructed knowledge is shared and developed (Schutz, 2003). Especially Schutz's examination of how people experience their 'everyday life-world' (Schutz and Luckmann, 1974: 3) draws my attention. In Schutz's sociology, the agent is viewed as manipulating physical and social structures in the pursuit of his/her purposes of living. Technology, in turn, is viewed as being appropriated by users into a different 'finite province of meaning' (ibid: 23), such as the 'scientific-theoretical attitude' (ibid: 24).

However, in this framework the everyday life-world is non-problematised and taken for granted as the experiences of the individual in his everyday life-world are perceived as 'unproblematic until further notice' (ibid: 4). Schutz does not deal with outside social relations and hierarchies, limiting himself to the investigation of human choice as determining the structure and balance of the everyday life-world (ibid: 18).²² Nevertheless, these conceptual tools are useful for investigating the position of ICTs at different levels of relevance in the subject's everyday life-world, while identifying the potential of technology to change the type of relevance for the user.

Although this understanding of the everyday does not deal with outside social relations and hierarchies, it guides research beyond a micro-scale or family-centred view of the everyday context. It also guides research towards examining the role of agency (e.g. users or non-users) in shaping everyday shared meanings and knowledge about issues of interest (e.g. Internet adoption). In comparison to the domestication tradition, the present research finds Schutz's 'lifeworld' to be a more useful framework as Schutz's attempt to define boundaries between individual freedom and constraint points out the interplay between imposed and freely chosen actions and choices in everyday life (Schutz & Luckmann, 1974: 100). Schutz conceives the existence of a stock of knowledge – inherited from the past – which puts constraints, gives chances and draws boundaries in the subject's effort to pursue his/her interests. He does not see individual interests and actions as separated from the experienced situation and the latter's relevance to the individual/s interests and actions; on the contrary, he sees individual interests as being 'swept along' (ibid: 115) by the situation, thus being modified by it. Therefore, the concept of 'situation' locates the individual in the social and cultural environment, defining their here and now and constituting 'the province of what is open to me now to control' (ibid: 111). These conceptual tools can be of use for the thesis and the examination of how ICTs and the Internet in particular are adopted on the grounds of people's freely made decisions and the possible constraints placed on them by historically inherited cultural and other trends in the country.

On the other hand, the evolving nature of everyday, as argued by Schutz and de Certeau's perception of the everyday as both oppressive and subversive (1984), poses the question of how we fix a certain frame of the everyday at a particular moment in time. This calls on us to be cautious about the time frame and the conditions in which

²² Habermas charges Schutz with 'hermeneutic idealism' (1987: 148) as he 'screens out everything that inconspicuously affects a sociocultural lifeworld from the outside' (ibid).

a specific snapshot of the everyday is studied. Also, parameters of engagement, consent or resistance are all important when studying the everyday. In the framework of the present research, such parameters could be not only factors of lower or higher Internet adoption but also reflections of the latter, with Internet adoption being a partial and integral element of the everyday. This partly reflects the argument of everyday life studies in media and communications that people 'do not simply adopt, but appropriate and use the media as one of their resources to assure them of their everyday lives and to construct the social world' (Hartmann, 2007: 80).

2.4.3 *'Resistance' and the empirical study of digital divides*

'Resistance culture' is the second aspect of culture that is employed for the study of digital divides in Greece. Research on technology adoption often tackles issues concerning 'not-wants' or 'resisters' so as to gain a better understanding of digital gaps and inequalities.

'Resistance' is a prominent aspect of society's culture. Fiske (1989: 23-47) discusses the notion of culture in media and communications as a range of formations of ordinary people resisting media 'products' created by the dominant 'power bloc'. Hall (1981: 228) sees resistance as a constituent of culture, describing the 'double movement of containment and resistance' in culture. Nevertheless, Fiske's and Hall's notions of resistance seek to examine the power struggles and hierarchy conflicts inherent into resistance, something that goes beyond the scope of the thesis.

Historians of technology have argued that 'resistance' is a force to be examined (Mokyr, 1990 & 1992) as 'the resistance to innovation is identified as a central element governing the success of new inventions' (ibid & 1992: 325). However, 'resistance' is a loaded term and from a techno-determinist perspective is considered to be 'a structural or a personal deficit...irrational, morally bad, or at best understandable but futile' (Bauer, 1995a: 2). In addition, the term 'resistance' is understood and takes shapes in many different ways, varying on the basis of the social context where it appears, the technological artefacts it concerns and the time period it comes to life. Resistance to ICTs is only one instance of technology-related resistance, being determined by the structural and time conditions in which it occurs.

For the purpose of this conceptual discussion of resistance, it is useful to review some possibilities discussed in Bauer's work. Although more scholarly works have reported on resistance to technology (Breakwell and Fife-Schaw, 1987; Hirschheim and Newman, 1988; Northcott et al., 1985; Willcocks and Mason, 1987), these mostly concern particular parts of the population (e.g. children)²³ or specific areas of living

²³ Breakwell and Fife-Schaw (1987) argue that young people's attitudes to new technology are pragmatic rather than evaluative and that such attitudes are strongly related to psychological factors, education and family background.

(e.g. the workplace) and do not quite touch on the different types of new technologies that Bauer's work does. Bauer (ibid: 13-5) questions the idea of 'resistance' as a diversion from the 'one best way' and examines the phenomena of resistance as a form of opposition or a challenging action against. He also questions the observable or not character of resistance, with questions of motivation and purposefulness determining the distinction between 'resistance', 'avoidance' or 'ignorance'. Bauer (ibid: 16-21) identifies intrinsic qualities and dynamics of resistance. He thus classifies resistance as 'active or passive', 'individual or collective', resistance referring to 'technology design', 'technology effects' or 'technology governance', and resistance where experimental, quantitative or qualitative means of measurement apply.

The present research has a more specific scope and focus of exploration, limiting the breadth of the issues examined from a resistance perspective. The 'what' of resistance involves the perceived role and effects of Internet technologies, while the 'who' of resistance looks at the cumulative impact of individual resistant behaviours and attitudes. Without excluding the possibility that resistance in the Greek context constitutes an informed and conscious manifestation of opposition, the thesis hypothesises that 'resistance' has by and large been inherited by historical legacies and cultural trends that the Greek civil society of modern times has been marked by. Nevertheless, the thesis does not intend to proceed to normative judgements of the resistance culture in Greece. It instead aims to unpack its complexity and importance for digital divides in the country. Thus, the hypothesised resistance culture towards Internet technologies and services will be first evaluated by the elite actors' general account of the information society in Greece. This is in terms with Bauer's argument that 'in analysing effects we need to take into account the reactions of innovators and regulatory bodies' (ibid: 25).

Cyberphobia or technophobia is an aspect of the 'resistance culture' that the thesis focuses on. Bauer (1995b: 99) regards cyberphobia as the epitome of 'the clinical eye on resistance to new technology' that 'prioritizes personal therapy over technological design', thus attributing a pathological deficit to the non-user. In Bauer's view, cyberphobia or technophobia expresses a techno-centric and normative view of people's attitudes to technology. It arguably overlooks the specificities of the environment within which resistance takes place, relying on self-reported data about whether and why people resist technology. Bauer (ibid: 113) contrasts technophobia, arguing that resistance is like the acute pain which signals the mismatch of expectations between users and designers. Hence, he argues (1993) that in many cases resistance affects technological development through re-allocating attention, evaluating and inducing modifications. He proposes that, instead of 'medicalizing everyday life' (1995b: 107), we should view 'the systemic process between designers and users over time', with resistance constituting the "testbench" information that makes a contribution to the process' of design formation and evolution (ibid: 112). The present

research takes a different approach at this point as it aims to illustrate that technophobia can be a useful analytic tool for disentangling the drivers of digital divides in contexts such as Greece. The usefulness of researching the term 'technophobia' and manifestations of it in real life can be fully uncovered only when its driving forces are identified and the mechanisms at work are examined in-depth, without getting involved in a psycho-driven discussion of the symptoms and diagnostics related to technophobia. Technophobia is often the result of socio-cultural conditions largely unknown to researchers and should not itself constitute a negative connotation of people's attitudes to new technologies.

As regards empirical research, resistance to ICTs has been studied since the 1990s. Empirical study has shown that people resist digital or cable TV for aesthetic reasons and because of the fear of technology dominance in everyday life (Silverstone and Haddon, 1996a). Resistance is often situated in everyday life, with personal life circumstances being studied as possible reasons for resistance. An indicative example is the pressure of responsibilities that population groups, such as lone parents, feel most of the time (Haddon and Silverstone, 1995b). Interestingly, resisting behaviours have been identified even in young people's reluctance to adopt certain ICTs (Hartmann, 2005: 144-5) while, as mentioned earlier, the typology of Internet non-users in Wyatt et al. (2002) contains the category of 'resisters'. The P-903 European survey in 2000 showed that non-users' indifference about the Internet can be taken as a passive form of resistance (Mante-Meijer et al., 2001). Also, Dutch women who took part in Internet training decided that the Internet does not fit in with their lives, thus becoming 'informed rejectors' (Rommes, 2003). A study conducted in Northern Ireland concluded that university students show strong indifference to the Internet, with the Internet being quite unimportant in young people's lives (Kingsley and Anderson, 1998). The 2007 UK Online report (2007: 13) argued about the existence of a number of non-adopters who are 'digitally dismissive' and have decided not to adopt the Internet although they had the opportunity to do so. Finally, studies in the USA have reached similar conclusions (Horrigan et al., 2003), arguing more about indifference or passive resistance and less about hostility to or negative action against the Internet.

2.4.4 Everyday life and resistance to technology: links to decision-making and implications for digital divides

Regardless of the value of arguments concerning the power struggle between the dominant and the subordinate in the culture of the everyday (Lefebvre, 1971; de Certeau, 1984; Fiske, 1989: 23-47), the thesis does not get involved with the antagonisms and conflicts between ordinary people or what has been called the 'power bloc' of dominant institutional and systemic forces (Fiske, *ibid*). The thesis looks at

everyday life and resistance practices and considers the web of actors interacting in ways that go beyond antagonisms and which are hardly subject to thorough examination and revelation.

The thesis backs Preston's (2005: 198) argument that ICTs' meaning and relevance are shaped by socially prescribed roles and identities in the everyday lives of different groups. Yet, beyond this argument and Ricci's (2000) claim that life cycle, economic conditions and generally 'life style' are strongly correlated to the use of and interest in new technologies, it is important to identify the links of the 'everyday' and 'resistance' aspects of culture to decision-making. The latest trends in everyday life studies attempt to extend the scope of research into the field of politics, arguing that people's place, categorisation and limitations in society have a role to play not only in people's attitudes to and evaluation of technology but also in politics. Everyday life and people's evaluations and attitudes entail 'important implications for public policies and strategy...which may serve to challenge or enhance the kinds of thinking and considerations that currently inform policy decision-making or practices' (Preston, 2003a: 3-4).

In this sense, the notion of the 'social shaping of technology' concerns not only technology but also decision-making as different socio-cultural contexts influence the development of different policy models. For instance, in neo-liberal post-Keynesian systems market- and competition-driven policies on technology are in place. In 'dirigiste' ideologies derived from Marx, Confucius and Keynes, greater emphasis is placed on state intervention, controllable competition and people's participation in the information society (Moore, 1998: 153-6).

From this point of view, the European Media Technologies in Everyday Life Network (EMTEL)²⁴ made an important empirical contribution. The EMTEL conducted empirical research in various regions of Europe and explored the links of the everyday with ICTs and the importance of these links for policy-making. Thus, the EMTEL aimed to provide the EU authorities with an insight into the possible insufficiencies of ICT policy frameworks in Europe, arguing that:

...without this sensitized investigation of the dynamics of the everyday and of innovation as a contested process of social as well as technological change we will misread and misunderstand the realities of innovation and the implications of those realities for policy (Silverstone, 2003: 8-9).

The aim of this research is to disentangle the understanding, evaluation and integration of Internet technologies in specific cultural settings and in close connection with the political and regulatory domains of activity. While technology is only an area in which culture and decision-making act, the engagement of users with technology entails broader cultural and political consequences (Silverstone and

²⁴ For other EMTEL research outputs, see: Georgiou, 2003; Cammaerts and Audenhove, 2003b; Durieux, 2003; Hartmann, 2003; Ward, 2003; Preston, 2003b.

Mansell, 1996: 224), with a reciprocal and highly interdependent relationship between technology, society, culture and politics developed over time. The vision of an apparently optimistic future in the information society masks profound uncertainties and concerns regarding questions such as: What is the role of new technologies in ordinary people's lives?; How are new media and information technologies controlled and regulated?; Who has the power to decide?; How does the policy over the Internet correspond to social needs and concerns?; How does society's culture influence policy- and regulation-making in the information society?; What, if anything, should change?

2.5 *Decision-making: its role in digital divides and connections with society's culture*

This section discusses decision-making, namely policy and regulation, and its role in digital divides. Section 2.5.1 introduces the importance of looking at decision-making when researching digital divides. Section 2.5.2 examines the element of regulation and draws on sociological accounts of regulation for the study of digital divides. Section 2.5.3 discusses the policy element and draws on conceptualisations of policy as socially driven and accountable for the study of digital divides. Section 2.5.4 recapitulates the discussion on decision-making and points to the dialogue of decision-making with culture in relation to the phenomenon of digital divides.

2.5.1 *Decision-making in the information society: determining digital divides?*

Why should decision-makers care about digital divides? This question brings me back to some of the literature discussed in Section 2.3.3, where digital inclusion was seen in relation to a complex map of socially exclusionary mechanisms. This question is often heard as the political significance of digital divides is commonly driven by normative assumptions regarding the effects of the phenomenon on social exclusion (Cammaerts et al., 2003: 301-6). The political significance of digital divides is supported by the idea that a democratic society needs to provide its people with equal opportunities (Frissen, 2003: 19). The literature maintains the importance of media literacy (Calabrese, 2003) and people's participation in the information society for the accomplishment of the democratic potential of society and the enforcement of social participation (Frissen, 2003: 28-31). Techno-enthusiasts, in particular, maintain that ICTs can empower the democratic potential of society and enforce social participation. Thus, techno-enthusiasts underline '...the connections among communication policy, welfare politics, and the ideal of the competent citizen in an information society' (Calabrese, 2003: 125-126).

Regardless of the techno-utopian aspects of such arguments, these arguments illustrate how access and constructive use of ICTs should constitute a 'part of social citizenship' (Cammaerts et al., 2003: 302) and that decision-making should reflect the needs of ordinary people and of the digitally excluded ones in particular settings of life. This indicates the necessity of illustrating the socio-cultural factors at work and their political implications so that the digitally excluded ones and the complex nature of exclusion are taken into account (ibid: 306). This touches upon issues of social justice and growth (Tambini, 2000), and political and regulatory bodies must confront the challenge of taking differential perceptions of digital divides into consideration, also accounting for phenomena of self-exclusion.

From this point of view, some argue that EU authorities are increasingly placing more emphasis on society's awareness of technological innovations under democratic processes of regulation and control (Steele, 1998). However, the decisions made by official authorities seldom correspond to the particularities of the socio-cultural contexts in which ICTs are taken up since they adopt a linear understanding of ICT's effects on economic and social development.²⁵ For instance, the dominant free market capitalist model sustains the market-driven idea of information as a commodity, failing to foster human needs (Haywood, 1998: 22). The narrow 'learning and earning' political agenda, a top-down model of coercing ICT use, and a linear political model of access, skills, use and social inclusion are some of the criticisms articulated about policy-making in the field (Selwyn, 2005). Sections 2.5.2 and 2.5.3 provide a better insight into relevant criticisms articulated about the EU regulation and policy for the information society.

Critical literature in the field calls on decision-makers to tackle issues that relate to engagement with technology, as well as to the outcomes and consequences of technology use (Selwyn, 2004a: 356). Decision-makers are expected to respond to the challenges of 'social context, social purpose, and social organization' (Warschauer 2003a: 201), while confronting the deeper socio-cultural factors driving self-exclusion and since 'all technologies are imbued with cultural significance' (Wyatt et al., 2002: 39). On the other hand, scant literature accounts for the multi-dimensional ways in which socio-cultural traits may influence decision-making in hidden or more obvious ways. The question 'why should decision-makers care about digital divides?' should be given an answer that goes beyond literature accounts of the socio-political significance of ICTs and technology's role in the development of a socially and politically inclusive society. Instead, it should receive an answer that sheds light on the under-explored ties between society's culture and decision-making.

Taking a sociological approach to regulation and policy, the next two sections examine discourses and critiques concerning the policy responsiveness to societal

²⁵ Since the early days of the information society, decision-makers' efforts have relied on two tightly interrelated motivations: economic development, and social harmony and cohesion (Moore, 1998: 150-2).

needs and requests, as well as the social accountability of regulatory schemes within and outside the information society. This sociological approach also aims to account for the actual and potential role of society's culture in influencing directly or not policy and regulatory practices and mindsets in the field. Hence, the present research makes the point that a more in-depth examination of the dialogue between 'bottom up' – culturally-driven – and 'top down' – decision-making driven – approaches to digital divides is needed.

2.5.2 A sociological approach to regulation and its importance for digital divides

This section provides a historical account of regulatory models and argues that the literature must pay attention to the underlying role of society's culture in regulatory mindsets and practices in general and in relation to digital divides.

'Command and Control' regulation in crisis: where is the public?

The historical evolution of regulation illustrates the complexity of interactions between regulatory authorities, the market and societal actors who are involved in the regulatory process.

The traditional Command and Control model is increasingly criticised (Black, 2002: 2) and a 'decentred' regulatory model is taking its place. This 'decentred' model sets 'an alternative diagnosis for "failures" of state-centred action' and requires that we 'reconsider not only how the state might act in order to pursue its goals but also how we should understand "regulation" itself' (ibid: 3). This decentred model has the following three elements:

First, a multi-layered privatised regulatory state which challenges the welfare regime. Liora and Rick Salter (1997) identified six trends in this new regulatory state: the decentralisation of operations; a focus on processes; politicalisation; an emphasis on co-operation and co-management; the dominance of the objectives of industrial development; and the fragmentation of civil society into stakeholders. These trends have created fears about the future of public accountability in the new regulatory state (Midwinter and McGarvey, 2001). Scott proposes overlapping accountability mechanisms (2000) that will be able to 'secure closer compliance with public objectives' (2001: 353). Others have argued that the regulatory state should not lead to the eclipse of the Keynesian welfare state by the Hayekian neo-liberal state (Braithwaite, 2000). From a management perspective, Black (2003) states that the decentred analysis challenges regulation by emphasising complexity and fluidity over simplicity and predictability.

Self-regulation is the second element of the new decentred model and is constituted by the co-existence of public and private forms of regulation (Hutter,

2001). Braithwaite (2000) highlights the value of self-regulation, while Gunningham (1999) argues in favour of a regulatory process that relies on continuous improvement, benchmarking and internal self-regulation. On the other hand, self-regulation has been criticised as incapable of controlling enterprises, taking socially responsible action and protecting the public interest (Schofield and Shaoul, 2000; Jacobson, 2001; Parker, 1999). In the midst of appraisals and criticisms of self-regulation, Ayres & Braithwaite (1992) and Hutter (2001) discuss the alternative of enforced self-regulation.²⁶ Nonetheless, Hutter (*ibid*: 381) recognises that enforced self-regulation still depends on the regulatory capacity of companies and the state's ability to play a monitoring role.

The third element of the decentred model is the privatisation of regulation. The literature acknowledges the huge risks that the privatisation of regulation might entail for the public interest as some private regulators are not legally authorised for their activities, constraining governments and jeopardising the public interest (Scott 2002). Alternatively, Scott proposes a 'reverse form of co-regulation' that will stimulate democratic input and inform private regulators of a regulatory regime in the service of the public interest (*ibid*).

A sociological approach to regulation concerning digital divides

The emerging decentred regulatory model, its components and the risks arising for the public interest drive the thesis to propose a sociological account of regulation, especially in relation to digital divides.

What does a sociological approach to regulation stand for?

Under the influence of the above regulatory trends, regulation and culture are not regarded as being obviously connected. For instance, these days scholars speak about 'a post-political order' (Garsten and Jacobsson, 2007) where antagonisms and power conflicts have been replaced by consensus and moralisation, leaving space for self-government and choice. They argue that authorities play a decreasing role 'thanks to' the domination of the market and the liberal modes of thought (*ibid*). They claim that post-political regulation lies at the junction between the political, the social and the ethical (*ibid*: 14), while they do not challenge the simplistic assumption that light regulation goes hand-in-hand with freedom, democracy and ethos. This 'post-political' model signifies that regulation moves away from the political sphere of consultation, favouring the market, appraising individualism and degrading the role of the public. This challenges the ways in which citizenship is situated in decision-making, as well as the role of the public sphere(s) as a decision-making barometer.

²⁶ Hutter (2001: 380-381) argues that regulation in this model is not as dependent upon state control, companies are more committed to rules and systems they have devised, and the state receives notable cost benefits.

On the other hand, the Centre for Analysis of Risk and Regulation (CARR)²⁷ adopts a more sociological view of regulation. The CARR points to the increasingly prominent non-state regulatory forces, such as economy and civil society, and to their dialogue with traditional state regulation and governmental authorities (Hutter, 2006). Remarkable emphasis is placed on what is called 'civil regulation' (Tully, 2004). This consists of partnerships between civil actors and market corporations, which aim to complement state regulation, to enforce market responsibility, and to benefit the civil society and market operators. Although critics warn that power and efficiency issues may arise, 'civil regulation' has the potential to enable informed participatory mechanisms in the regulatory domain (ibid: 12), pointing to the underlying links between decision-making and societal factors. Also, other CARR research (Lodge et al., 2008) illustrates how cultural worldviews can be used as an analytical tool for understanding and explaining public policy and regulatory strategies: 'a regulatory regime has to be understood as a temporary settlement that reflects the dominance of one worldview over others' (ibid: 3).

These instances of CARR research support a sociological approach to regulation as they point to the actual role of society in regulation-making and to the underlying role of cultural values in the strategies and practices applied in regulation. Nevertheless, this research framework does not shed light on the two-way interaction between society's culture and regulation in the domain of media and communications in particular.

Why is a sociological approach to regulation valid in media and communications?

A sociological approach to regulation has the potential to give a new perspective on the model of non-state regulation, involving socio-cultural factors in the interactions between state and market forces in media regulation.

In media and communications, the model of non-state regulation and the deconstruction of the welfare state under the imperatives of liberty and independence seem to undermine state regulation (for more, see Calabrese, 1997: 20; Mattelart, 2003; Stelzer, 2001: 40-2). On the other hand, literature continues to exist that contrasts popular neo-liberal views in support of deregulation and argues that the state still influences significantly the availability of resources, the establishment of legal frameworks and the development of investments (May, 2002: 150).

A sociological approach to media regulation could find support in the argument that the regulation-scape has close connections with society's culture and media culture (Silverstone, 2004). Silverstone recognises that regulatory provisions are 'not sufficient as guarantors of humanity or culture' (ibid: 440), pointing to the market-oriented character of regulation and the undervaluation of the social aspects of media

²⁷ For more, see: <http://www.lse.ac.uk/collections/CARR/research>.

regulation. He argues that such social aspects depend on 'a critical and literate citizenry' (ibid), although he did not look at the potential or actual role of culture in media regulation.

In pragmatic terms, a sociological approach to media regulation can be appealing to arguments that the social character of regulation in telecommunications has been at risk over the last ten years. The International Telecommunications Union (ITU) (1996: 6) observes the increasing shift of telecommunications regulation towards the market, stating that regulation 'focuses on the rapid transformation of telecommunications markets'. Bauer (2002) discusses why the electronic communications regulatory framework proposed by the EC has shifted its focus from issues of public interest to those representing business interests. He warns that the notion of the 'public interest' has almost disappeared from the EU regulatory framework for the information society, pointing out the proportionally large participation of market forces in consultation processes compared to public institutions and civic organisations (ibid: 124).

Drawing on empirical research on media regulation, Livingstone et al. (2007) argue that ordinary people's interests are broadly defined through expanding the scope of the consumer instead of defining one against the other (ibid: 78). The debate between 'citizen' and 'consumer' illustrates the difficulty in the regulatory provisions and resources allocated to different parts of society (ibid: 73-4). Citizens are consumers as well as human, social and political beings whose expectations go beyond market provisions. Regulation and decision-making processes are positioned within the public sphere, with the state being very interdependent with civil society (Habermas, 1996; Mouffe, 1992). However, the 'consumer or citizen interests' issue remains unsolved (Walton, 1989), while the lack of a 'positive definition of the citizen interest in relation to media and communications' (Livingstone, et al. 2007: 85) does not guarantee a sufficient account of people's interests in relevant regulatory practices.

Especially in the conventionally perceived anarchic space of the Internet (Grossman, 2001), regulation constitutes a broad, rapidly evolving and difficult to define practice. On the other hand, the Internet is a web of technology and people, being 'determined not by technological capabilities alone, but through a multitude of intricate social processes' (Dutton, 2003: 11). The deeply social nature of Internet services requires a regulatory regime that recognises these complex interactions and corresponds to people's needs and interests. Literature in the field argues that this constitutes one of the challenges that EU Internet regulation has not encountered successfully (King, 2003). The literature also asks whose laws and interests apply in cyberspace, arguing that the forces driving legislation lie at the core of the problem (Hedley, 2003). Along these lines, the neglect of end-users and the over-appreciation of technical prospects by law-makers is underlined (O'Brien and Ashford, 2003), often

resulting in technological advancements that leave some social groups behind (Russell, 2003).

In addition, the new market-oriented policy paradigm calls for the uniformity of Internet laws across nations, creating the 'paradox of nationalism' (Hedley, 2003). The establishment of an international order to which all nations subscribe (Hughes, 2003) and where socio-cultural differences remain beyond consideration is a paradox. In the EU, the goal of uniformity and compliance poses questions concerning the feasibility of a uniform EU cyber-order while divergent socio-cultural and national identities co-exist. It is here that questions about the importance of national contexts for regulation arise (Sancho, 2002), necessitating the consideration of how ICTs interact with diverse social, technical, cultural and political relations to produce a mixed set of outcomes (Goodwin and Spittle, 2002: 235).

Non-state regulation and privatisation in the media mean that the relationship between regulatory practices and citizens as well as between the market system and consumers is not understood well enough (Veljanovski, 2001: 113). This lack of clarity is met not only on the side of regulators but also in severely fragmented civic action in the field. Increasing changes of social stratification go hand-in-hand with the decline of community action and the prevalence of individualism and cultural proximity across national borders (Webster, 2001). People are not defined anymore on the basis of their social class or national identity, whereas their personal choices might bring them close to different social structures and geographical or time locations; this is Castells' 'systemic volatility' (1996). Thus, societal actors often fail to articulate a unifying, concrete and overarching definition of their interests (Collins and Murrone, 1996). Cultural nuances and their unclear role in media regulation pose the question not only of whether regulation takes society's culture into account but also of how society represents itself and influences regulation in a positive direction.

The thesis aims to employ a sociological approach to regulation in order to understand the complexity of actors and relations involved in Internet regulation as well as the role of this complexity in the Greek case of digital divides.

2.5.3 A sociological approach to policy and its importance for digital divides

Policy in the information society consists of initiatives that aim to promote new technology equipment, infrastructure and content through use, research and trade at all levels of social life. The concept and reality of the information society attract criticisms regarding the role of policy-making in general and in relation to digital divides.

On one hand, there are discourses that raise the rhetorical character of the information society and place the blame on policy. Such discourses argue that the

information society is nothing more than political rhetoric: 'it meets the needs of politicians because it promises a technological fix to deep seated social and economic problems, but as a "new" initiative it distracts attention away from the failure of previous similar initiatives to solve these problems' (Garnham, 1997: 327). On the other hand, some literature suggests more open policy models such as the layered model where the interfaces between four layers will facilitate open and inter-networked communication: 'traditionally, communications policy was organized around horizontal divisions between service categories and between geographic regions... [and] the introduction of computers into communications networks challenged the horizontal model' (Werbach, 2002: 39-40).²⁸ Other literature brings up the insufficient social accountability of policy-making in the information society, arguing that policy is surrounded by a rhetoric that addresses economic interests and the digital economy vision (Mansel, 2002: 417). Such views criticise the economy-centric character of current policies and claim for user-driven, content-concerned and culture-sensitive policies. Below, I present the core of such critiques, as synoptically presented by Servaes (2003: 19):

Table 2-2: Policy-making in the information society

Current corporate-driven policy	Preferred user-driven policy
Agitated market/uncertain revenues	'Controlled' market/'guaranteed'
Competition	'New deal' type of policy
Short term	Long-term objectives
Technology-push/technology-specific	User-driven solutions
The medium is the message	Content-oriented

The above critiques illustrate the importance of a sociological approach to policy-making, with policy attention to civil society in the information society lying at the core of the interest of such critical voices. The exemplar of EU policy is indicative in this respect, while the EU is the broader context in which Greek policies are positioned in and influenced by.

In March 2000 the European Council meeting in Lisbon declared that an overall strategy is required, inviting the Commission to draw up an eEurope Action Plan. This Plan aimed to build an information and knowledge-based economy where better jobs and greater social cohesion would take place (EC, 2000). The EU enlargement addressed new questions and brought up new challenges and opportunities for the member states. The 13 candidate countries launched a collective action, the eEurope+ Action Plan in June 2001. The eEurope+ aimed to accelerate the reform and modernisation of the economies in the acceding and candidate countries, clustering its actions around the same objectives of eEurope and the same indicators

²⁸ It is proposed that communications policy is developed around four vertical layers – content, applications services, logical and physical layer – rather than around horizontal categories (Werbach, 2002). In this way, the convergent and crosscutting nature of services and networks will be taken into account and the more open-access use and development of the Internet will be supported.

selected by the EU-15. Its objectives mainly concerned the promotion of a cheaper, faster and secure Internet, the investment in people and skills and stimulation of Internet use.

Although eEurope called on the European authorities 'to ensure a truly inclusive information society' (EU, 2001: 4, quoted in Carpentier, 2003: 100), EU policies have been characterised as being 'technology-fixated' and accused of going against 'socially-centred visions and imaginations' (Preston, 2003b: 48). Such criticisms point out that more policy emphasis has been given to 'the design and production of new ICT devices and systems over the application and use of existing technologies for social and cultural ends' (ibid: 48-9). Also, the EU authorities are criticised for over-emphasising market liberalisation in the information society, while overlooking other critical aspects of policy-making in this tough area (Jordana, 2002a: 8-11). The critique concerning the over-emphasis on market liberalisation goes hand-in-hand with critiques concerning the absence of public debate and consultation. What is argued is that the 'public interest' plays a particularly limited role in development of the vision of the European information society and in the design of specific policies and regulations (Bauer, 2002). EU communications policy seems to struggle with past normative legacies in its effort to establish an efficient paradigm (Cuilenburg and McQuail, 2003: 196-7). The normative policy model²⁹ of the past today gives way to an emerging policy paradigm 'driven by an economic and technological logic, although it retains certain normative elements' (ibid: 198). The critical element is that normative and public interest parameters are increasingly weakened, whereas market criteria are ever more empowered in this policy process.

Likewise, the socially accountable language used in official EU policy documentations has largely been viewed as just a semantic shift. It is considered a shift that constitutes 'little more than occasional rhetorical gestures', masquerading the deeply consumerist logic of policy-making (Preston, 2003b: 51). In this spirit, some argue that, in the fragmented and liberalised market environment in Europe, socially sensitive policies to ensure a public universal service are insufficient (Pauwels & Burgelman, 2003: 77). Thus, critical voices bring up social interest as a policy aim and the medium through which successful policies are achieved, with culture being conceptualised as both the vehicle and goal of policy-making.

In addition, striking national heterogeneity has marked the EU. Different national governments attempt to interpret the European policy in different ways, pursuing diverse goals through different means. National variability and divergence became obvious in the 1990s when domestic opposition and resistance to telecommunications liberalisation emerged (Thatcher, 2002). As far as Southern

²⁹ The normative model was introduced in the 1945-1080/90. It legitimised government intervention in communication markets for social purposes, as well as a public monopoly over radio and broadcasting (Cuilenburg and McQuail, 2003: 191-5).

Europe is concerned, research identifies a 'Southern European' interventionist policy approach to telecommunications which has much to do with 'cultural affinities' in the countries of that region (Jordana, 2002b).

Thus, EU policy in the field has confronted difficulties and contradictions caused by varying representations of conflicting interests (Schneider and Werle, 1990), as well as by intra-institutional rivalry and policy entrepreneurship (Simpson, 2000: 445). For instance, the convergence of ICTs caused policy divergence in the European Commission as policy entrepreneurship was situated against cultural differences and the conflicting interests of the Commission, leading different DGs to express sectoral interests (ibid: 447). Esser and Noppe (1996: 555) claim that the Commission has only apparently exhibited leadership in the ICT sector, while Peterson and Sharp (1998: 223-5) emphasise the dominant role of industries in the development of EU policy agendas in the 1980s and 1990s. From this standpoint, Simpson argues that the Commission '...has merely created an arena within which the most powerful private sector actors have determined policy' (2000: 457).

Finally, the particularities of each EU member state entail certain challenges for policymakers since it is acknowledged that 'no single road to the Information Society' exists and that 'subsidiarity plays an important role' (Servaes, 2003: 27). Critical debates concerning the real character and quality of the European information society question the argument of the 'Euro-specificity' of policy. Instead, they perceive 'Euro-specificity' as a rhetorical vehicle to cover the illusive and contradictory character of the EU information society and to keep the equilibrium between heterogeneous member states that view EU policy as an 'a la carte system' (Pauwels & Burgelman, 2003: 63). It is here that questions concerning the local versus the global element of policy and the principles of subsidiarity versus uniformity arise, emphasising the bottom-up legitimacy that a European unity of nations requires (ibid: 80). The principle of subsidiarity indicates that 'each social and political group should help smaller or more local ones accomplish their respective ends without, however, arrogating those tasks to itself' (Carozza, 2003: 38). Although a general and, in some respects, vague concept, characterised by internal tensions and paradoxes (ibid: 39), subsidiarity can operate as a significant structural principle for the full and successful implementation of decisions made in the EU centrally by the member states. Respecting cultural and other differences in the EU region, subsidiarity promotes and 'integrates international, domestic, and subnational levels of social order on the basis of a substantive vision of human dignity and freedom' (ibid: 40). In order for the abstract idea of subsidiarity to obtain a practical orientation, mediating mechanisms between the EU and the member states can be employed. This can happen through the formation of mediating networks and, in particular, the establishment of European agencies which will stimulate National Regulatory Authority (NRA) independence and

monitor decision-making procedures of co-operation between NRAs, member states and the EU (Geveke, 2003: 27).

Besides the above critiques of EU policy in the information society, there is empirical research in Europe that supports the idea of the 'social shaping of technology' and raises its implications for policy-making. Such research illustrates the diversity of 'users' adoption of, engagement with and attitudes towards new ICTs in the sphere of everyday life in contemporary Europe', arguing about the ways in which policy will respond appropriately (Preston, 2005: 205-6). Empirical research in Europe concludes about the following socially-driven implications for policy-making: the importance of 'downstream' applications in the digital context and communication services; the need for more demand-driven policies; attention to innovative modes of networking and the participation of civil society; and, greater attention to non-utilitarian applications of new ICT (Silverstone, 2005).

The above critical views of EU (and not only) policy in the information society pose the question of whether policy-makers are taking societies and their cultures into account. Regardless of the usefulness of this question, the extent to which societies and their cultures may have a less obvious and more indirect role in shaping policy cultures and practices remains relatively under-explored.

2.5.4 Decision-making and its dialogue with society's culture: determining digital divides?

The discussion in Sections 2.5.2 and 2.5.3 does not reject any of the innovative regulatory or policy models that are emerging in the information society. It only proposes a sociological approach so as to review such models critically, locating them in a social context. Although the consideration of ordinary people in decision-making may have some bearing on policy and legislation initiatives, on self-regulation and public awareness, these initiatives are often marked by fragmentation, inconsistency, contradiction, sporadic applicability and a non-satisfactory reflection of social needs (Kizza, 1998: 98). Further questions are posed in relation to the Internet as some consider it 'a source of regulatory arbitrage' (Froomkin, 1996), posing the question of whether it is 'the modern hydra' (ibid: 129).

Apart from social accountability, the discussion in Sections 2.5.2 and 2.5.3 points to other areas to be examined in the literature. On one hand, the CARR work and sociologically inspired approaches to regulation and policy review critically the consideration of ordinary people and their cultures in decision-making. In this sense, the suggestion of the CARR research that cultural studies could be a analytical device in examining the influence of worldviews or cultures on policy and regulation practices might offer a useful research tool (Lodge et al., 2008). On the other hand, the

complexity of society's culture and its role as an active actor in decision-making are areas of examination which remain substantially unexplored.

I acknowledge the research and practical usefulness of arguments concerning the social fragmentation of the current regulatory state, which Liora and Rick Slater (1997) call 'stakeholderization', representation of the public interest and the democratisation of regulatory governance. Also important are works that support the 'proceduralization' of regulation (Black, 2001 & 2000), namely the establishment of social regulatory frameworks through public consultations, public access to information and procedural fairness and the encouragement of third parties' participation in regulation. Nevertheless, there are other possibilities that the research needs to examine empirically. These are possibilities concerning so far largely disregarded arguments, such as Hall et al.'s argument that culture 'regulates' implicitly – possibly by putting governments under the control of credit ratings – with no need for intentionality (1999: 5-7). Along these lines, the research literature should examine in depth Gunningham and Grabovsky's (1999: 4) understanding of regulation as displacing the role of authority and power in the regulation process.

The vision of the 'multimedia revolution' calls for a reformulation and reorientation of existing regulations and policies and leaves open the possibility for 'multiple futures for the multimedia revolution' (Silverstone, 1996: 217). Thus, it invites the research to develop a socio-cultural and decision-making account of digital divides instead of a technological and economic one. The present research explores digital divides and their driving forces by situating divides in context and by bridging, conceptually and empirically, the gap between decision-making and the socio-cultural traits of the information society.

2.6 *Conceptual framework*

The thesis aims to examine the reasons digital divides in Greece are more exacerbated than in the great majority of countries in the European region by examining the dialogue between specific facets of society's culture and decision-making in the Greek information society. To achieve this, a conceptual framework that examines digital divides from a socio-cultural and decision-making perspective was put forward in this chapter. This conceptual framework is framed to some extent by sociological approaches to technology but aims to go even further, improving our understanding of the phenomenon of digital divides as well as the theory we use to understand it.

More specifically, the conceptual framework of the thesis problematises literature discourses that dichotomise the phenomenon of digital divides. Also, it

mobilises the concepts of social inclusion/exclusion and self-exclusion and examines the key arguments concerning the role of decision-makers and the implications for ordinary people. On the grounds of this critical approach to digital divides, the thesis adopts a socio-cultural perspective and draws upon the elements of 'everyday life' and 'resistance culture' that conceptualise technology adoption as socially-dependant and culturally-driven. The selection of these two aspects of society's culture as drivers of technology adoption is also grounded by the socio-cultural specificities of Greece, as discussed in Chapter 3.

The research literature somewhat fails to illustrate the reciprocal and highly interdependent relationships between technology, society's culture and decision-making. This brings the discussion to the perspective of decision-making and the elements of policy and regulation. The conceptual approach to decision-making taken in this chapter relies on literature that discusses policy and regulatory models in the information society and their evolution from a sociological perspective. Such sociological literature brings to the fore the issue of the social accountability of decision-making practices, but fails to illustrate the complex interaction between decision-making and the cultural and life contexts in which ordinary people live and digital technologies are adopted. The discussion in this chapter attempted to argue for this interaction in relation to digital divides, while the significance of this argument for the Greek case of divides is shown in Chapter 3.

In short, the conceptual framework is constituted by the following elements:

- an approach that considers digital divides as being culturally-, politically- and regulatory-driven;
- an analytical framework that draws on the sociology of technology literature and employs insights from everyday life and 'resistance culture' studies; and
- a framework for the study of decision-making, its role in digital divides and its interconnections with people's everyday lives and culture.

This conceptual framework guides the investigation of the principal research questions introduced in Chapter 1:

1. What are the general characteristics of the Greek information society?
2. How far does society's culture influence digital divides in Greece?
3. How far do Internet policy and regulation influence digital divides in Greece?³⁰

³⁰ As stated in the introductory discussion of Chapter 1, the source of knowledge for policy and regulation is the discourse and perceptions of key actors rather than some objective survey or observation of actual policies and regulations. More specifically, the role of policy and regulation in digital divides is evaluated according to what elite actors (Chapter 5) and ordinary people (Chapters 6-8) have argued.

4. How do society's culture and Internet policy and regulation intersect in influencing digital divides in Greece?

The first principal research question aims to overview the field and therefore no particular lines of investigation are followed. The other three principal research questions are examined by pursuing the following lines of investigation (research questions):

- What are the cultural and everyday life settings of ordinary people in Greece of relevance to and importance for the course of the Greek information society?
- How is decision-making shaped in Greece and what are its key features for the country's information society?
- What is the dynamic between society's culture and decision-making in the Greek information society and in relation to digital divides?

The chapter that follows provides a detailed presentation of the Greek case of digital divides. This presentation aims to illustrate how the conceptual framework fits in with the Greek case of divides and to obtain a better insight of this case. Then, the above lines of investigation (research questions) are operationalised methodologically in Chapter 4.

3. Greece: Digital divides from a socio-cultural and decision-making perspective

3.1 Chapter overview

This chapter introduces the case of Greece, highlights certain aspects of the puzzle of digital divides in Greece and brings to the fore the role of society's culture and decision-making. Further, the conceptual framework discussed in Chapter 2 is elaborated and connected to the case of divides in Greece.

Section 3.2 overviews the Greek information society, highlighting the persistence of digital divides and role of society's culture and decision-making. Section 3.2.1 provides empirical evidence of commonsense aspects of digital divides in Greece, giving the Greek information society a European context. Section 3.2.2 presents ICT and Internet adoption in Greece and argues that more progress is needed. Section 3.2.3 highlights the cultural grounds of digital divides in the country. Section 3.2.4 discusses policy and regulation in Greece with regard to Internet technologies. Section 3.2.5 presents the divergence of Greece from EU regulation, pointing to effects on its digital divides.

In Section 3.3 I espouse a historical view of the factors driving the Greek information society. Section 3.3.1 reviews the history of 'late-late' industrialisation and early parliamentarism, as well as the legacy of romanticism and patriotism in Greece. It discusses clientelism and patronage networks and their implications for social policy, culture and citizenship, as well as for the country's information society. Section 3.3.2 presents the historical conditions of the economic underdevelopment and state-dependency of the IT sector as the driving forces of the slow development of the ICT market in Greece. Section 3.4 concludes the discussion.

3.2. *The Greek information society: digital divides and the elements of society's culture and decision-making*

This section illustrates the key traits of the Greek information society within a European (EU) framework and the features driving the thesis to explore digital divides from socio-cultural and decision-making perspectives. The aim is not to test a theory or a phenomenon across different borders, nor to compare a set of countries within a particular theoretical or empirical framework. Greece stands as a case study on its own account or, according to Kohn's typology (1989), as an object of study. Any

comparisons with the EU and other European countries will only allow me to discern idiosyncrasies of the Greek information society and its divides without conducting cross-national research. The potential for cross-national comparisons is considered in the thesis' concluding chapter when the Greek case has been tackled extensively and other national contexts can be considered for comparative research in the future.

3.2.1 *The Greek information society: digital divides and the European context*

Greece is a long-standing EU member state with one of the highest national development rates across the EU. On the other hand, the available statistics on digital divides in Europe, which mostly look at physical access and penetration indicators of digital divides, show that Greece has one of the lowest Internet and new technology penetration rates in the EU, undermining the vision of a European information society.

Regarding economic indicators of the information society, when the information society began to develop in 1997 public telecommunication investment was 3.7% in Greece and 5.4% in the EU (Greek Information Society Initiative, 1999: 2). However, investment in the Greek information society had risen by 27% more than the annual global increase in gross national product in the same period (ibid). The annual growth rate of ICT expenditure between 1992 and 1999 was very strong in Greece and only slightly lower than the EU average (DDSI, 2001: 1). Moreover, the ICT market in Greece was growing rapidly in the early 2000s (EITO, 2001: 465) although Greece still had the lowest percentage of network digitisation in the EU (Greek Information Society Initiative, 1999: 1). More recent data from Eurostat show that, although ICT expenditure in 2004-2006 remained the same (2.7% of GDP) in the EU-27, Greece lagged behind with 1.2% of GDP in 2006, slightly lower than in 2004 (1.3%). This ICT expenditure share was the lowest in the EU-27.³¹

Delays in development of the Greek telecommunications market are part of several delays in ICT diffusion in the country since the early 1990s. Reflecting debates concerning the North-South digital gap in Europe, countries such as Greece and Portugal have been lagging behind in the adoption of all three clusters of 'television', 'computer' and 'mobile' technologies (Servaes, 2003: 23). Early research in 1999 showed that Greece and Portugal had the lowest penetration rate for the video recorder, with this then being the most advanced technology in Europe of that time. In the same year, Greece had the lowest satellite dish penetration rate (2%) in contrast to countries like Austria where 52% of the population had a satellite dish. In this period, the usage of CD-ROM technology ranged from 53% in Sweden to 6% in Greece.

The picture has been similar since Internet networks were first developed in Europe.

³¹ For more statistics, see Eurostat at: <http://ec.europa.eu/eurostat/>.

Table 3-1: Internet and computer indicators

Information Society Indicators	Greece	EU*
Home access to the Internet	1999	3%
	2000	5.8%
The Internet in schools (1999-2000)	Primary schools	1%
	Secondary schools	18%
Internet use (2000)	11.2%	25.7%
Computer for work (2000)	25.3%	45%
Internet access (2001)	12%	36%
Internet use (2003/04)	15%	49%
Internet use (2005)	24%	49%
Computer at home (2007)	41%	57%
Internet access at home (2007)	19%	42%
Broadband at home (2007)	14%	36%
Internet access at home (2008)	22%	49%

* Depending on when research was conducted the figures are for the EU-15, EU-25 or EU-27.

As shown in the above table (Table 3-1), in 1999-2000 1% of primary schools and 18% of secondary schools in Greece were linked to the Internet, with Greece having the lowest school connectivity in the EU (EC, 2001a: 4).³² Also, Greece failed to keep pace with the use of computers as in 2000 only 25.3% of the population used computers for work compared to the EU average of 45% (ibid: 7). In 2001, 12% of households in Greece and 36% in the EU had access to the Internet (EC, 2001b: 6). Regarding the Internet at home, the percentage of people with home access to the Internet in 1999 was 3% in Greece and 12% in the EU. By April 2000, the respective figures were 5.8% in Greece and 18.3% in the EU and, by October 2000, 11.7% in Greece and 28.4% in the EU (European Commission DGINFSO).

More recently, the 2005 Eurobarometer (EB) survey concluded that Greece was last in Internet usage in the EU-25 with a mere 24% of the population using the Internet in 2005 (rising from 15% in 2003/2004) (EC, 2006a: 14). The same survey showed that mobile telephony in Greece is more common than the Internet, even among children, with 30% of children owning a mobile phone and 26% using the Internet in 2005 (36% and 50%, respectively, in the EU-25) (ibid: 19). The EB E-Communications Household survey found that only 41% of Greek households had a computer in 2007, positioning Greece below the EU-27 (57%) and only above Portugal (39%), Romania (35%) and Bulgaria (27%) (EC, 2008a: 49). The same survey concluded that computers are more prevalent in old member states (60%) than in the NMS-12 (45%), with Greece (41%), Portugal (39%), Spain (46%) and Italy (49%) being those old member states with lower computer availability than the average member state (ibid). As regards Internet penetration (ibid: 54), 49% of households in the EU-27 had Internet access in 2008, with Greece (22%) being the old member state with the lowest Internet access rate and at the bottom of the EU-27 together with Bulgaria

³² The next lowest percentage was Luxembourg, 25% of primary schools connected, and Germany, 81% of secondary schools connected.

(22%).³³ This figure is comparatively lower for Greece than in 2007, as Greece was then in a better position (19%) than Bulgaria (14%) and Romania (12%) (ibid). In Internet connection terms, the EB 2007 survey (ibid: 56) concluded that 36% of European households had a broadband connection in 2007, with Greece having only 14% of its households accessing the Internet via broadband. Greece is again at the bottom of the EU-27 together with new member state Bulgaria (14%).

The figures reported in EB 2005 and 2007 confirm the particularly slow change in Internet penetration in Greece over the last few years and show that Greece is the country with the highest share of households with a PC but no Internet connection (ibid: 55). Likewise, the Eurostat research (2007) confirmed the above conclusions with respect to how Greece is positioned in the European context. Also, it added that while 45% of individuals in the EU-27 access the Internet at least once a week, the respective percentage in Greece was 23%, just above Bulgaria (22%) and Romania (18%).³⁴ Depending on the aspects of digital divides one looks at, such as access to or use of a computer and the Internet, type of Internet connection, penetration of mobile and 3G telephony and digital technologies available at home, school or work, one can reach the conclusion that Greece lags behind the rest of Europe in the penetration of information and communication digital technologies and particularly Internet technologies.

3.2.2. *The Greek information society: catching up but more development is needed*

In attempting to evaluate digital divides in Greece, I can conclude that the Greek information society made some progress in the first years of this decade, but a stagnation has appeared in the last 3-4 years.

More specifically, the 2005 Greek Research and Technology Network survey (GRNet, 2005) painted an improved picture of ICT adoption in Greece in the early years of the decade. This was also reflected in the EB 2005 survey which pointed to the relative decrease in the digital gap between Greece and the EU (EC, 2006a: 14). On the other hand, the GRNet survey (2005) illustrated that the growing penetration of ICTs in Greece in 2001-2003 was followed by stagnation in 2004-2005. In 2005, Internet use increased (24.6%) by just 0.1% compared to 2004 (24.5%), while remaining lower than in 2003 (25.2%). Also, in 2005 0.7% of Greek households were connected to the Internet via ISDN, 10.8% via ADSL, while 1.4% declared they were connected with the fastest (i.e. broadband) Internet connection (ibid: 95). Computer usage in 2002-2003 rose by 1.7%, reaching 34.2% of the overall population in 2003. The decrease of

³³ Even the countries of the NMS-12 group had higher Internet penetration than Greece; the only exception was Bulgaria, with the same penetration rate as Greece (EC, 2008a: 54).

³⁴ For more statistics, see Eurostat at <http://ec.europa.eu/eurostat/>.

2% in 2004 and 2.1% increase in 2005 did not substantially change the picture of low penetration, with only 34.3% of the population using computers (ibid: 5).

Looking at more recent figures, the ITU (2004-07) confirms that, although Internet and broadband penetration have gone up in Greece, this increase is unsteady, varying from year to year and hindering substantive progression. The ITU figures illustrate this shaky course of the Greek information society, presenting this problem in a European framework. For instance, the ITU argues that in 2007 Greece was the country with the lowest Internet penetration (22.8%) among all EU-27 countries (55.7%). The same data show Greece in the same year only had broadband penetration of 7.4%, ranking just above Latvia (5.2%) even though Latvia had twice as much Internet penetration as Greece.

3.2.3 *The Greek information society: shaped by 'cultural divides'?*

The above data showing that Greece is behind other European countries and particularly slow in Internet access and usage does not give us the whole picture of digital divides. Other, more qualitative aspects of divides matter (e.g. quality and extent of usage, integration of the Internet in everyday life etc). Therefore, it is important to explore possible drivers of digital divides that go beyond access to physical equipment, especially drivers concerning society's culture and decision-making. Moving beyond technology access and usage figures, the available national data imply a persistent culture of little interest in new technologies in Greek society; a culture marked by contradictions and interrelations with other parameters of social living, as discussed later.

Specifically, national GRNet surveys explored why most citizens in Greece do not use ICTs in general and the Internet in particular. The 2005 data indicated that 'I don't need it' is the most important reason given for not using the Internet, although this percentage decreased slightly from 30.7% in 2003 to 29.3% in 2004. Also, a significant number of non-users cited 'lack of interest' as the reason for non-use, with a very small increase from 15.6% in 2003 to 15.8% to 2004. On the other hand, 'lack of access' has become an increasingly less important reason for Internet non-use. Also, 'lack of an Internet connection' was in 2003 (25%) a less important reason for not using the Internet than in 2002 (30.8%) (GRNet, 2003: 32). As regards cost-related reasons for non-use, a quite small number of non-users was concerned about affordability issues as 10.3% in 2004 and just 4.2% in 2003 mentioned high cost (GRNet, 2005: 77). Likewise, in 2003, even more people (30.7%) than in 2002 (23.1%) stated they do not need the Internet, while concerns about the cost of an Internet connection appeared smaller (4.2%) than in 2002 (9.2%) (GRNet, 2003: 32), illustrating a persistent culture of little interest in new technologies in Greek society.

Surveys by the National Statistical Service of Greece (ESYE) confirm these observations, concluding that non-appreciation of the Internet is the main reason for its non-usage. In the 2005 ESYE survey, most respondents (43.1%) stated the main reason for not accessing the Internet was the belief the information provided online is not useful or interesting (ESYE, 2005). In the 2006 ESYE survey, even more non-users (55.7%) argued the main reason for not using the Internet is the lack of desire or interest (ESYE, 2006), while cost- and security-related reasons accounted for only about 20% of Internet non-users in the 2005 and 2006 ESYE surveys.

In a comparative perspective, it was shown above (Section 3.2.1) that Greece lags behind almost all, if not all, EU member states in computer, Internet and broadband penetration. This means that a higher number of non-users exists in the country, raising questions about why people in Greece do not use the Internet. The EB 2007 survey showed that this large number of non-users goes hand-in-hand with the larger number of people in the country (58%) than in the EU-27 (50%) arguing that they lack Internet access at home because no one in the household is interested in the Internet (EC, 2008a: 76). On the other hand, conventional forces of non-usage such as the high cost of an Internet connection and equipment seem to matter less in Greece (17%) than in the EU-27 (29%).

Besides empirical research, official statements within the country argue that Greeks lack familiarity with new technologies. Such statements present, albeit quite normatively, a picture of public fear and raise questions concerning the cultural drivers of digital divides in the country:

In our country today there is a tendency to distinguish the few (but rapidly increasing in number) users of computers and communication networks such as the internet from the **many who treat the new technologies at best as a mystery and at worst as a danger for their future** (emphasis added) (Greek Ministry of the Economy and Finance, 2002: 12).

This picture of public fear seems to have been encouraged by the practices and attitudes of official authorities in the country. It is indicative that the Head of the Electronic Crime Squad, Mr. Sfakianakis, argued in the Greek parliament in 2008 that 1% of children in Greece are addicted to the Internet and 20% are close to addiction.³⁵ Although no authority in the country provides evidence of this, politicians, journalists, public authorities and civil society organisations rushed to not only unquestionably accept this argument but also to spread it further, demonising the Internet.

Thus, the questions to ask are: do Greek people's negative attitudes to the Internet stem from their cultures and life settings, or do formal policies and regulations fail to provide them with a good understanding of the potential of Internet technologies? Can such negative attitudes be explained by looking at possible interactions between society's culture and policy and regulation in the country? These

³⁵ Source: SKAI TV, News bulletin of 18:00, 22 January 2008.

questions are so far unexplored by national or international research on the Greek case of digital divides. The socio-cultural part of this question has, however, been explored by empirical research outside Greece which argues that people experience uneasiness with technological artefacts such as ICTs for several reasons (see Chapter 2, pp. 35-6). Such research poses challenges for the Greek case of divides, calling us to go beyond factual data about digital inequalities. Besides, the theoretical discussion of resistance and technophobia in Chapter 2 (pp. 41-8) points to the broader relevance of resistance culture, complicating claims about the appropriation of ICTs within people's everyday lives and giving some conceptual support to the question concerning the cultural drivers of digital divides in Greece. However, the thesis aims to move beyond purely socio-centric research literature and to look at the role of decision-making and how the latter may interact with socio-cultural parameters, co-influencing digital divides in one way or another.

3.2.4 Policy and regulation in the Greek information society: old problems, new challenges

Moving on to decision-making, it is important to begin with a brief presentation of the course and traits of official policy and regulation in the Greek information society.

As regards regulation, the Greek government delayed to move to a decentred model of privatisation and self-regulation as it started to liberalise and privatise the telecommunications market in the early 1990s. Overall, in the 1990s regulatory practices aimed at the parallel achievement of two equally important goals: first, the encouragement and promotion of ICT growth and development and, second, the protection of privacy and other fundamental human rights (Greek Ministry of the Economy and Finance, 1999: 86). The need to compromise these two goals led to the creation of a state-independent, info-communication commission to regulate the market. Thus, full privatisation of the Greek telecommunication sector only took place on 1 January 2001 and under the regulatory supervision of the National Telecommunication and Post Office Commission (EETT) (Gantzias, 2001: 23-43).

The national regulatory framework of that period not only failed to keep up with the new regulatory model but also did not correspond with the evolving nature of technology. It failed to see the social and contextual nature of technology, without considering the social particularities and cultural differentiations of technology usage in different social spaces. In this respect, national regulation failed to keep up with people's expectations, needs and customs (PDGS, 1999).

In the current decade, the Greek regulator has been faced with new challenges,³⁶ while the long-lasting shortcomings of regulation in the Greek information society are increasingly raised: 'first, it is oriented towards regulating "static" situations; secondly, it is primarily concerned with the "material", the "tangible" world, while more and more activities involve "intangible" goods and services' (Greek Ministry of the Economy and Finance, 2002: 76). These shortcomings hinder the regulator's capacity in the information society (ibid) and the 2002 White Paper acknowledges the need for 'new rules for the protection of data, the protection of privacy, the commercialization of material protected under intellectual property rights, etc' (ibid), as well as the need for 'citizens participation' (ibid: 83).

Although regulation in the Greek information society covers a range of areas, it does so in an incomplete, partial and anti-social way. For instance, in 2001 official terminology in Greece had reportedly not accepted the term 'cyber-crime', whilst there was no specific and effective regulation for the prevention of online fraud (DDSI, 2001). The lack of legal terminology concerning cyber-security, on one hand, and the definitional gap for 'web' and 'hacker', on the other, indicate the legal deficiency. In addition, there have been huge delays and continuing disagreements in the country about what laws and fines to apply for the phenomenon of paedophilia on the Internet. The incomplete, static and quite rigid regulatory framework in the Greek information society constitutes a key challenge for Greek policy-makers and regulators, requiring further investigation.

The need for regulatory change is brought up by the OECD report on regulatory reform in Greece that interestingly points to instances of societal resistance to such change. The report argues about the need for more efficient regulatory reforms through more drastic political leadership, as 'although most Greeks will benefit from regulatory reform, the resistance of many protected groups to needed change is hard to overcome' (OECD, 2001: 2). The OECD recommends Greek civil service reform to support the establishment of an efficient and transparent regulatory system. It pays attention to existing administrative barriers (ibid: 2-3) and the tight state control of the economy and independent regulators since such control obstructs regulatory reform, maintains the old-fashion Command and Control regulatory model and deters the creation of a competitive telecommunications market in Greece (OECD, 2002b: 57). Thus, the OECD highlights the need for 'structural change' (ibid), underlining the criticism of other literature that the Greek public sector lags behind forward-looking ideologies and practices for promoting ICTs (Voulgaris and Sotiropoulos, 2002).

As regards policy-making, in 1995 the Greek government declared for the first time its intention to work towards developing the information society. The

³⁶ The 2002 White Paper remarks: 'technological convergence does not necessarily involve a "convergence of legislation"...' (2002: 76).

government addressed the technological delays by emphasising the lack of sufficient infrastructure. It thus aimed to limit the technological gap with other European countries, while neglecting the social and cultural implications of the information society (Constantelou, 2001). Such policy practices entailed that the authorities of the country failed to address questions about how policy and decision-making in general could handle the cultural specificities of Greek society and fight long-standing historical legacies, as shown later. The need to advance institutional change in order for society's culture to be addressed was partly recognised in the 1999 White Paper: 'the changes that technology brings with it question the adequacy of existing laws and impose their re-orientation from the institutions for the industrial society to those of the Information Society' (Greek Ministry of the Economy and Finance, 1999: 8). On the other hand, the Operational Programme Information Society (OPIS)³⁷ launched in 2001 and which ended in 2006 had a top-down character and illustrated that policy-makers in Greece have aimed to encourage the diffusion of ICTs without touching on societal issues and cultural influences on technology adoption. Thus, initiatives taken by the OPIS promoted short-sighted public administration strategies and entailed the empowerment of well-established socio-political identities in the country.

The failures of traditional state-driven policies in the Greek information society become obvious from development indicators such as the investor interest indicator. According to the OECD (2000b), the ICT sector's percentage of total capital investment in Greece was very small in 2000 – only about 8% compared to countries with 20% such as Sweden, France, Austria, Germany, the UK and the Netherlands, to 60% in Belgium and to 80% in the USA. This low level of investor interest in Greece is arguably 'related to the lack of efficient policies on behalf of the State' (DDSI, 2001: 9). Likewise, private-driven initiatives have not managed to do well in Greece. Non-governmental institutions and associated public funding have played a minimal role in development of the information society in Greece: 'the number of non-government institutions is limited and the contribution of the latter to policy-making is minimal...public funding in Greece has been kept to a minimum of 0.5% of GDP annually, approximately four times less than the respective EU average' (ibid).

The above shortcomings highlight the need for revised regulation and policy in the Greek information society. However, contrasting and conflicting interests among involved parties are currently obstructing realisation of such a need. The private sector of providers and networks requires the full exploitation of information, whereas public bodies and government initiatives aim for protection of the common good, fundamental rights and democratic principles. On the other hand, rules, regulations and policies must overall be discussed further with participants and elaborated by representative public bodies so that the relevant frameworks fit people's needs better.

³⁷ More information is available at www.infosoc.gr.

Government, private sector and administrative/independent authorities are all needed in the decision-making process (PDGS, 1999).

3.2.5 Regulation in the Greek information society and divergence from the EU: failures and outcomes

As this section started with an overview of the Greek information society in the EU context, it is worth looking at how the national regulation responds to EU regulations and addresses key areas of concern in the field. This will allow the study to provide evidence about the traits of decision-making in Greece. In the following bullet points, the OECD report on regulatory reform in Greece (2002b: 56) points out such evidence:

- delays in meeting the requirements of EC derogation;
- considerable delays in implementing the necessary regulatory framework and lack of essential safeguards;
- a lack of expertise within the independent regulatory authority;
- a lack of advanced telecommunication services;
- a lack of an alternate infrastructure;
- discriminatory licence allocation for fixed wireless access; and
- relatively far behind in telecommunication market development compared to EU partners.

I now discuss some of these points, emphasising Greece's delays in implementing EU regulation and the lack of essential safeguards.

The implementation of EU regulation

CARR research touches upon EU regulation of telecommunications and early accounts (Thatcher, 2001) argue that a broad consensus has been achieved between the EC and national authorities on the key principles and actions of EU regulation on telecommunications. Such accounts argue that even minor disagreements between national and European authorities more concerned issues of timing and procedures than substantive matters of regulatory strategy (ibid: 2). Nevertheless, Greece has become subject not only to delays in the transposition and implementation of EU regulation but also to governmental inactivity and reaction to the overall EU regulatory dictate.

In the implementation of EU Electronic Communications Regulatory Package, the 9th report of the European Commission in 2003 states there were major divergences of transposition in most EU member states in key areas of concern to the new regulatory package (EC, 2003: 3). The report expresses concerns about delays and

inconsistencies in implementation of the regulatory package in most member states, including Greece: 'The national measures (and drafts in the case of member states that have not yet transposed)... give rise to some concerns that the Commission considers should be addressed if the objectives of the new framework are to be realized to the full' (ibid: 5).

Later, the 10th EC report on implementation of the EU Electronic Communications Regulatory Package (EC, 2004a) announces the generally positive picture of notifications and legal measures taken in member states. Nevertheless, it notes that five countries – Belgium, the Czech Republic, Estonia, Greece and Luxemburg – had not transposed the framework one year after the deadline. As a result, the Commission launched infringement proceedings for non-notification and proceedings before the European Court of Justice against Belgium, Greece and Luxemburg (ibid: 9). The latest 11th EC report highlights the Greek case and states that Greece only adopted primary transposition measures in January 2006, stressing in addition that a lot needs to happen in Greece with respect to the transparency of public authorities and market autonomy (EC, 2006b: 11).

The delayed and incomplete adoption of EU regulation raises the issue of divergence across the EU and questions concerning the possible usefulness of the principles of mediation and subsidiarity briefly discussed in Chapter 2 (Carozza, 2003; Endo, 2001; Fisher and Schley, 2000; Geveke, 2003).³⁸ The case of Greece is nevertheless particularly challenging for European telecommunications regulation.

Internet regulation in Greece: failures and concerns

Besides Greece's formal regulatory delays and structural difficulties, EU documentation illustrates the inefficiency of regulatory frameworks in the Greek information society. This concerns evidence about socially-driven Internet indicators such as low awareness and lack of security among Greek Internet users.

Public awareness in shortage in Greece

Internet regulation is expected to take action and set rules in order for public awareness of Internet risks to increase.

According to the Eurobarometer survey (EC, 2006a), Greek parents (8%) are the least likely after Hungarian parents (5%) in the EU-25 to set rules when their children use the Internet. Although Greece has a higher percentage (60%) of rules set by parents on their children's media use than other European countries (57%), these rules mostly concern traditional media forms. For instance, 49% of Greek parents and

³⁸ The European Council (2004) confirmed that more monitoring is needed. The question is whether the EU needs to extend the infringement proceedings or should reinforce subsidiarity and mediation processes through, for instance, National Regulatory Authorities.

only 41% of parents in the EU-25 have expressed intense worries and set rules for television (ibid).

In addition, Greek parents (86%) are those with the strongest need for more information on how to protect their children from illegal or harmful Internet contents (44% of parents in the EU-25) (ibid). This shows that Greek parents are the least informed about the Internet in the EU, making further policy and regulation action a necessity.³⁹ This is also illustrated by the fact that Greek parents have comparatively little awareness of where to report illegal Internet contents as 43% of Greek families are aware of where to report such contents compared to 52% in the EU-25 (ibid).⁴⁰

Internet security and public fears

Another aspect of regulatory success is whether and to what extent regulation strengthens people's sense of security and safety on the Internet.

The 2004 Eurobarometer survey (EC, 2004b) noted a general increase in security attacks and threats over the Internet in Europe (ibid: 9). Due to the rising attacks, Greece was, after Portugal, the country with the lowest percentage of Internet users who engaged in e-commerce in the first years of this decade. Whilst the EU average share of users purchasing items and services online was 35.6% in 2001, the respective percentage in Greece was 15% (EC, 2002: 13). Also, in 2000 and 2001 Greece had the lowest number of secure servers among all EU member states (ibid: 9). The latest 2008 data (EU, 2008b: 20-21) confirm this picture since only 11% of the Greek population feel safe using the Internet for purchases (33% in the EU-27). This means that only 34% of those with Internet access at home in Greece make online purchases, whereas the respective average for the EU-27 is 56%.

Especially as regards minors, Greek regulation lacks sufficient provisions for minors to feel safe online. Greek legislation does not distinguish between illegal and harmful contents on the Internet, treating everything as illegal, especially in relation to the production and trading of harmful online contents. The only distinction refers to television (Presidential Decree 100/2000 introduces the EC Directive 2000 on 'Television without Frontiers'). Internet regulation in Greece can be characterised as opaque; there are a few laws that regulate the online environment but none stipulates content control and no provisions explicitly cover the protection of minors. This may either entail or reinforce pre-existing public fears about risks on the Internet, discouraging Internet adoption and challenging the forces monitored and the results achieved by Internet regulation in the country.

³⁹ On the other hand, the majority of people in North European countries do not feel the need for more information, pointing out an awareness gap between the North and South (EC, 2006a).

⁴⁰ A greater information deficit lies in countries where children's access to the Internet is low (ibid).

In summary, this section provides insights into the argument that digital divides in Greece are more exacerbated than in the rest of Europe, especially in relation to Internet penetration. Also, it argues that the examination of digital divides in Greece can be facilitated by looking at technology adoption figures along with the exploration of the socio-cultural and decision-making landscape in the Greek information society. Especially with respect to the links between society's culture and decision-making, the conclusion of the EC benchmarking report that 'societal change takes more time. It requires organizational changes, a shift in mindsets, modernization of regulation, different consumer behaviour, and political decision' (EC, 2002: 18) is particularly applicable to the Greek case. This is illustrated in the following historical discussion of the Greek context.

3.3 History of Greek culture and politics: shaping digital divides?

The historically grounded discussion in this section aims to provide an overview of the main traits of the Greek context, touching in particular on socio-cultural and political vehicles of the Greek information society and the divides in it.

3.3.1 Greek culture and politics: weak civil society and clientelistic state-dependency

The historical context in which the Greek information society has developed is described in the following statement: 'as a newly developed country, Greece has had to fight with several problems from the past, such as poor network infrastructure, inflexible bureaucratic structures, largely ineffective State apparatus and distortions in competition' (DDSI, 2001: 3). Yet this statement requires an in-depth examination of the socio-cultural and political trends of the contemporary history of Greece, accounting for the ways in which history has influenced digital divides in the country.

The epicentre of interest involves the historical conditions of 'late-late' industrialisation and early parliamentarianism in Greece. These conditions have led to social inertia and state-dependency and subsequently to a culture of clientelism, patronage networks, individualism and romanticism in the country. These historical elements have resulted in a particularly weak civil society and in a gigantic public administration that has distorted the market and discouraged technological development in Greece.

'Late-late' industrialisation and early parliamentarianism

In existing socio-historical accounts, Greece is seen as belonging neither to the capitalist centre of the West nor to the periphery of the under-developed South. Instead, Greece is considered part of the semi-periphery as it developed a premature Western-like type of democracy and an economy of the late-late development paradigm with industrialisation taking place after 1929 (Mouzelis, 1986).

On one hand, the premature development of parliamentary mechanisms was coupled with increasing urbanisation and a lack of industrialisation in the late 19th century. This drove the majority of urban population in Greece to increase the pressure to be absorbed in public bureaucracies and resulted in the creation of a gigantic, inflexible and ineffective public sector. On the other hand, the Greek economy faced delayed industrialisation, while the existence of light industry only drove the establishment of state-controlled institutions which suppressed the autonomous development of non-state economic actors. As a result, Greece diverged from the capitalist centre, performing unevenly under close state-control of the economy (ibid). Thus, Greece has been categorised as a "late-late" industrialising capitalist society with early and persistent quasi-parliamentary politics' (ibid: xiv); traits which allow me to bring up historical evidence in support of the particularities of the Greek information society.

In more analytical terms, Balkan countries like Greece were under the full control of the patrimonial Ottoman Empire until the 19th century and had never experienced absolutism as did other European societies. They obtained their independence in the 19th century, attempting to implement Western parliamentary settings. However, these settings were based on restricted popular participation and an authoritarian particularistic state which was controlled by a small number of land-owning families ('tzakia' in Greek), thus manipulating the electorate in both legal and illegal ways.

The transition to broader patterns of political participation was achieved gradually through the extension and transformation of political patronage networks at the turn of the 20th century (ibid: xviii). Towards the end of the 19th century and during the rise to power of Eleutherios Venizelos' Liberal Party, the previously powerful land-owning families ('tzakia') became politically weak, signalling the end of the oligarchic political monopoly of those families and the transition to post-oligarchism. In the same period, massive urbanisation allowed multitudinous urban middle classes to exert pressure and broaden the political system, while retaining the clientelistic characteristics of the oligarchical system and with no substantial industrialisation in place (ibid: 50).⁴¹ The broadening of political participation before

⁴¹ At the beginning of the last century, the public sector in Greece was larger than in more developed political systems in Western Europe (Mouzelis, 1986: 7-15).

industrialisation and with the absence of an industrial proletariat resulted in the transition to mass politics without the presence of autonomous trade unions and working-class parties. As an outcome, the personalistic organisational forms of the oligarchic period prevailed, but by extending and centralising the traditional forms of clientelistic politics. Clientelism remained the key characteristic of Greek politics after the military coup of 1909 and during the 20th century,⁴² with previous clientelistic mechanisms becoming centralised through state expansion and the centralisation of the major political parties of that period (ibid: 39-45).

As regards the economy in the phase of the transition to more representative forms of political participation, industrialisation had not emerged as yet and thus its effects on the transition were weaker in Greece than in Western Europe (ibid: 3-7; Stavrianos, 1958: 607). Greece established a 'late-late' industrialised economic system, achieving a degree of industrialisation only during the inter- and post-war years of the 20th century (ibid: xiii-xiv). Even then, industrialisation was import-substitution, without the encouragement of dynamic export-production processes. This was because the well-established state apparatuses played an incorporative and leading role in the industrialisation process, controlling the action of trade unions and working-class organisations in a vertical way (ibid: 50-1). Working classes were under state control, lacked a dynamic of productivity, as well as autonomy in the political arena, and were subject to vertical/dependent relationships with the post-oligarchic incorporative state (ibid: 70):⁴³

The thesis is interested in looking at the influence of the above political and economic characteristics on technological development in Greece. The dominance of clientelistic and incorporative politics, and the emergence of 'late-late' import-substitution industrialisation in the country influenced technological development in a negative way. Industrial capital in Greece never managed to develop its own dynamic, being deeply dependent on a personalistic and clientelistic state. The dominance of patronage networks in the Greek political arena created an increasingly weak and passive civil society. The clientelistic relationships between the state and civil society, the late and state-controlled economic development, and the gigantic public administration made private business bodies and investors reluctant about promoting new technologies in the country:

...the emergence of the import-substitution difficulties of the 1950s, the slow-down in manufacturing investments on the one hand, and the more massive and aggressive popular demands for redistribution on the other made private investors increasingly reluctant to involve themselves in technologically more complex and economically less certain industrial ventures (ibid: 175).

⁴² Clientelistic mechanisms have been persistent in other Mediterranean countries as well. A detailed analysis of Mediterranean countries is offered by Gellner and Waterbury, 1977.

⁴³ The Greek army played the role of an interest group, exercising political pressure within a highly heterogeneous and weak civil society (Mouzelis, 1986: 97-183).

Clientelism and patronage networks: implications for social policies

At this point, it is worth discussing some of the above historical traits in relation to their effects on social policies and decision-making in the country.

The historical formation of the state, economy and society in contemporary Greece points to interdependencies, with patronage networks and clientelistic relations dominating peculiar interactions among the actors involved. More specifically, increasing urbanisation in the late 19th century, the lack of industrialisation and premature development of parliamentary mechanisms all created early-established clientelistic relationships between the state and civil society. Society was selling its political value (votes) in order to gain a post in the tertiary sector, whilst the state was enhancing its political assets by creating a giant, inflexible public administration sector. The state aimed to take advantage of social dependency. It attempted to attract votes and enlarge its political capital by granting posts and establishing anti-developmental state mechanisms which prevented Greece from experiencing full and timely industrialisation and development (Mouzelis, 1995; Tsoukalas, 1977).

Greece witnessed an extreme form of 'partitocracy' since the loci of political partisanship and party clientelism undermined all institutional sub-systems and immobilised civil society (Mouzelis and Pagoulatos, 2002). Even in the post-dictatorship period after 1974, the restoration of democracy carried with it the legacies of the past century. The highly personalistic and local baron-based clientelism of the past was transformed into a form of 'bureaucratic clientelism' (Lyrintzis, 1984), with trade unions being absent from the process of the restoration of democracy.⁴⁴

On the other hand, clientelism significantly affected the state, preventing the development of a strong and professional public administration. The bargain between voters and political parties made the state subject to successive and frequent governmental changes, experiencing regular changes of the character of and human resources in the public administration. This state uncertainty resulted in a lack of professionalism, meritocracy, productivity and stability in the public sector, intensifying the ineffectiveness of the gigantic and unstable organising system of the public administration (Lyberaki and Tsakalatos, 2002). Therefore, social policy in Greece has been marked by a legacy of heavily politicised and centralised decision-making and an impoverished administrative infrastructure, while lacking continuity, long-term planning and co-ordination (Venieris, 2003).

Bureaucracy and a lack of continuity in the public administration, coupled with civil servants' sense of stagnation and lack of incentives, have restricted the policies and initiatives for technological development to so-called 'hardware' equipment. Also, there appears to be underinvestment in and an underestimation of cultural and social

⁴⁴ This is in contrast to cases such as Spain where trade unions had an important role to play in the restoration of democracy (Zambarloukou, 1996).

capital within the public administration as far as it concerns the aim of policies to promote technological development in the country.

Today, an increasing number of analysts, scholars and policy-makers recognise the need for structural change in Greece; change that will redraw the boundaries between the state and civil society (Patmesidou, 2000: 304). At the same time, it is broadly recognised that the above historical legacies, the continuous lack of socio-political consensus and support, and the climate of political inertia all prevent the materialisation of such a change in contemporary Greece (Venieris, 2003).

Clientelism and individualism: implications for civil society

The legacy of the despotic Ottoman regime prevented the presence of intermediate groups between the state and ordinary people in Greece, constituting a tremendous impediment to the development of an active and autonomous civil society in the country. On the contrary, what emerged were state protected and corporatist civil associations subject to close state control and in accordance with well-established patronage networks (Davaki, 2001). In this respect, the continuous imbalance of institutional spheres, mostly through early partitocracy and intermeshed interests that controlled political and cultural spheres, has historically weakened the autonomy of Greek civil society (Mouzelis and Pagoulatos, 2002: 13).

The notions of civil society and citizenship in Greece were also underdeveloped in the last century and seriously undermined in the post-war era. This is mostly due to the colonisation of most institutional spheres by the state and party system until 1974 and to the emergence of economically powerful individuals after 1974.⁴⁵ New institutional imbalances were created, and partitocratic and plutocratic elements were intensified through the competition of political parties and economically powerful elites for the control of civic actors (ibid). This has led to 'the incorporative-clientelistic mode', according to which civil society is determined by personalistic patron-client networks (Mouzelis, 1995), while it is driven by individualistic goals that ignore common social aims and interests (Sotiropoulos, 1996). Even today, civil society in Greece is weak and has a low stock of social capital and trust. Even though democracy has flourished in Greece since 1974, civic organisations have remained dependent on central state institutions with their massive emergence in the 1990s being a top-down political decision rather than a bottom-up process (Sotiropoulos and Karamagioli, 2006: 19-20).

The lack of civic spirit and conscious social citizenship, coupled with incomplete industrialisation, reliance on family bonds and disassociation from social collective action, can explain the existence of social heterogeneity as well as the lack of collective culture in Greece (Petmesidou, 1996). The lack of horizontal civic action,

⁴⁵ The IT market and industry is discussed in Section 3.3.2.

independent society and voluntary organisations, as well as the close relationships between representatives of conservatism such as the church and the state have all discouraged awareness-raising in Greek society. By implication, the country is short of a culture of universalism and social citizenship. Values that rest on the family and kin are strong, social resistance to progressive change occurs and weak social participation in policy-making prevails (Venieris, 2003 & 1996; Petmesidou, *ibid*).

The conditions of social heterogeneity, clientelism and individualism have created an atmosphere of short-termism in the country which neglects the importance of social inclusion and social transformation. Thus, the country's civil society has obtained cultural characteristics that influence new developments negatively. Indicative of these characteristics is what the literature points out as a tremendous difficulty of Greek society in adopting and incorporating new ways of living and doing (Voulgaris and Sotiropoulos, 2002). As an outcome, what has been gradually established in Greek society is an identity of reaction and negativism to technological and not only developments, making it difficult for people in Greece to absorb new technologies and incorporate them in their everyday lives. This is why Greek society has been stamped as a largely non-receptive society where technological artefacts do not find the space to grow and spread.

Romantism and patriotism: implications for the information society

The above historical review of politics and society in Greece clearly points to implications for the Greek information society. At this point, it is worth pointing out the role that patriotism and romanticism have played in the emergence of contradictions and imbalances in the Greek information society.

Patriotism and romanticism have marked Greece due to the existence of a national identity before any economic, political and cultural institutions were established in the country. The notions of patriotism and romanticism resulted in the formation of the ambivalent national identity of 'Greekness'. This identity has been marked by a feeling of superiority and has been accompanied by distrust of national institutions (Mouzelis, 1995). This identity, coupled with a pretty extrovert lifestyle, has driven people in Greece to the usage of technologies which allow showing-off and an improvement of their social profile. At the same time, more creative technologies and usages have been less popular in Greece as they are not considered to contribute to personal exposure and social acceptance.

The enthusiastic reception of mobile telephony in Greece is indicative, which contrasts Greek people's reluctance to use ICTs, such as computers and the Internet. Mobile telephony and oral speech have been somewhat substitutes for the Internet in Greece, while in countries like the UK e-mail and written speech may be regarded as respective substitutes. Hence, Greece differs significantly from the Finnish

information society model as this model was developed thanks to a strong and well-established national identity and to a collective civil spirit, as well as due to an overall positive attitude to technology (Castells and Himanen, 2002).

3.3.2 Economy and state-dependency in Greece: under-development of the IT sector

The historical discussion in this chapter contains three axes: society, politics and the economy. Thus, I will conclude the discussion by looking at issues concerning the state-dependency of the economic sector in Greece. These issues illustrate in particular how politics and the state-dependency of the economy have deprived the Greek information society of a dynamic IT sector that would allow market openness and the dissemination of IT products and services throughout society.

The market in Greece has been driven by state-dependency, particularly after the economic depression of 1929. The delayed industrialisation in the 1930s found the enormous state mechanisms to be well-established and dominant. This led the private economic sector to comply with the existing situation, pursuing the state's protection for its benefit and without developing its own autonomous action (Lyberaki and Tsakalotos, 2002). Thus, clientelistic relations were also developed between economic actors and the public sector, with a number of economic actors being well-privileged and protected by the state (Mouzelis, 1986).

The economic interventionism of the state significantly determined the course of the market in Greece. The state created the economic infrastructure and controlled the economy through the establishment of specialised agencies and investment in a range of economic projects. This resulted in a significant economic crisis in the late 1950s and early 1960s as the simple technologies used and the hothouse conditions in which the Greek economy was operating prevented the international competitiveness of national economic actors. The over-inflated service sector, the low-productivity jobs in the state bureaucracy and the low-efficiency agricultural sector entailed the mistaken management of resources and lack of modernisation in a costly and non-competitive industry (ibid: 113-5).

The above are reflected in the IT sector. The IT sector in Greece has been and is still dominated by small firms that rely heavily on state funding and protection. This can possibly explain the inertia of the IT sector with respect to the delayed liberalisation of the IT market in Greece. The telecommunications market in Greece was only opened up in January 2001 as until that point the Hellenic Telecommunications Organisation (OTE) had a state monopoly (Anestopoulou and McKenna, 2001: 1). On the other hand, the state did not take the necessary initiatives for digitisation of the public administration in time. Also, the small number of large IT companies in Greece has not been given the chance to develop internationally as the

introverted policy-making of Greek state authorities does not allow a move to synergies with international firms (Voulgaris and Sotiropoulos, 2002). In this way, businesses in the IT sector tend to be in line with current delays and deformity of Greek society and the public administration, being characterised by a limited and traditional way of thinking and doing, as well as by persistent state-dependency (ibid).

The OECD confirms the obstructive role of the state in development of the IT market in Greece. It stresses that, despite the achieved progress, 'burdensome regulations through the whole of the Greek economy are still slowing structural adjustment and job creation, discouraging market entry and foreign investment, encouraging work in the informal sector and reducing public sector effectiveness' (2001: 2). On the other hand, recent research has shown that the market sector in Greece is attempting to compensate for the lack of state-driven innovative initiatives and funding: 'ICT companies had to look for alternative ways of funding, and at the same time press the State to adopt policies that would attract more foreign capital, both from the EU and overseas' (DDSI, 2001: 8).

Nevertheless, these appear to be unique characteristics of the Greek case, raising critical questions of the efficiency of policy and regulation in the Greek information society as a whole.

3.4 Conclusion

In conclusion, digital divides appear to be more exacerbated in Greece than in the rest of Europe, with the majority of Greek people being Internet non-adopters. Also, the Greek case of digital divides challenges conventional discourses on aspects and forces of digital divides, illustrating the significance of viewing digital divides from a socio-cultural and decision-making perspective.

Greece stands historically in between the industrialised rich North and the poor developing South, being part of what is called the 'semi-periphery' (Mouzelis, 1986). This politically and economically 'hermaphrodite' position has established rigid social-cultures and led to a history of disproportional development and integration of new technologies in Greek society. Along and due to this disproportional development, Sarikakis and Terzis (2000) argue that a knowledge gap is evident, with the big majority of Greek citizens being excluded as new media users. Still, although Greece is attempting today to make a successful transition to the new liberalised information society, it has well-established cultural and long-standing political and regulatory frameworks. In this sense, it is an interesting case study for researchers who

wish to draw conclusions about the body of countries that confront similar transitions, as well as about the role of society's culture and decision-making.

The thesis seeks to examine empirically if and the ways in which the socio-cultural and political legacies of the past can be argued to be the forces shaping digital divides in the Greek information society. Chapter 4 aims precisely to illustrate how this empirical examination will be pursued through insightful and multi-layered research design. This research design and the empirical examination of elite actors' and ordinary people's views that cover the remainder of the thesis thus attempt to convincingly answer the research question concerning the relationship between society's culture and decision-making and its role in shaping digital divides in Greece.

4. Methodology and Research Design

4.1 *Chapter overview*

This chapter outlines the methodology and mixed three-step research design of the thesis, while also indicating how the methodology relates to the overall conceptual framework. Section 4.2 presents the methodology's main elements and how the research questions are operationalised by employing qualitative and quantitative methods. Section 4.3 presents the in-depth qualitative interviews with elite actors in Greece. Section 4.4 presents the large-scale quantitative survey of Greek Internet users and non-users. Section 4.5 describes the follow-up focus groups with a small number of surveyed individuals. Section 4.6 discusses the administration issues involved in this three-staged empirical research and outlines the analytical framework for analysing the qualitative and quantitative data obtained. Section 4.7 summarises the main elements of the research design and how they inform the thesis through complementarity and elementary triangulation of the obtained findings. The chapter concludes by stating some possible methodological limitations.

4.2 *Research design: mixed methodology and operationalisation of the research questions*

The thesis attempts to explore Internet adoption in Greece from a socio-cultural and decision-making perspective. To do so, it employs a three-staged mixed methodology: in-depth interviews with elite actors; a large-scale survey with Internet users and non-users; and, focus-groups with Internet users and non-users.

The use of multiple data sources, the type of methods to employ (e.g. mixed-method approach), the design of methods (e.g. sequential model) as well as the data analysis strategy (e.g. complementarity or cross-validation of findings) are all issues discussed by key methodological textbooks and reviews (Lobe et al., 2007). In any case, the methodological decisions made and overall research design employed are determined by the objectives of research, the quality and type of research subjects and the type of data that research aims to obtain.

In deciding which data collection methods could yield the information needed to answer the research questions of the thesis, I evaluated the points of distinction between qualitative and quantitative methods. Although the conventional distinction between qualitative and quantitative research appears to be clear-cut and simple, together these two methodological systems constitute a whole. They share the same goals of objectivity, reasoning and reduction of observations without losing

information, while they have the potential to be employed in the same research as ‘a continuum’ (Alasuutari, 1995). What distinguishes these two methodological systems is the processual, analytical and interpretative means of exploring the subject matter of research: quantitative research is based on numbers and statistical testing of causal relationships in order to conclude about the study population as a whole; in qualitative research, the collected data are considered a totality and no inference is made about objects lying outside the study.

For the purposes of this research, I consider that both qualitative and quantitative methods are valuable for exploring the research questions: ‘Quantitative methods focus inquiry on a discrete set of variables to address a specific research question or hypothesis. Qualitative inquiry opens up the field of investigation by recognising the broader but interconnected complexities of a situation’ (Lobe et al., 2007: 15). In this sense, I believe that qualitative research can have a dual role in the thesis: first, it can provide an overview of the issues the research subjects consider important for the topic under examination, without imposing a certain list of issues for consideration (e.g. the in-depth interviews with elite actors); second, qualitative research can provide a qualitative insight into patterns of issues, attitudes and behaviours which quantitative research has marked as prominent (e.g. the focus groups of Internet users and non-users). In this respect, the recommendation is indicative that a ‘qualitative approach is best...when you want to grasp the meanings, motives, reasons, patterns, etc, usually unnoticed in standardised approaches’ (Lobe, et al., 2008: 6). On the other hand, quantitative research is useful in the thesis as it allows a generalisation of findings and hypothesis testing, while identifying patterns of opinions, behaviours and attitudes in the studied population (e.g. the survey of Internet users and non-users).

A mixed-methodology design is applied in the present research in order to obtain insights into the issue of digital divides from more than one perspective, comparing and cross-validating the obtained data. This strategy is suggested in opposition to a one-stage and single methodological approach because the research questions point methodologically to designing both a bottom-up (ordinary people) and top-down (elite actors) account of digital divides; an account where population patterns of attitudes and behaviour will be jointly considered within contextual parameters and meaning construction processes. In this sense, the thesis moves away from arguments that separate the ‘ecologically valid, interpretative techniques’ and the ‘more experimental, quantitative or supposedly “scientific” methods’ (Lunt and Livingstone, 1996: 4).

Regardless of the risk of placing a different weight on different methods and thus reaching inconsistent conclusions, the thesis’ goal is to obtain rich insights into digital divides in Greece. This will be achieved by complementing each type of data

with another and using 'each approach in relation to a different research problem or different aspect of a research problem' (Brannen, 1992: 12). I will also make an elementary attempt to triangulate all three types of data, aiming at what Denzin (1978: 291-305) named methodological triangulation as a between-method approach. Despite claims that triangulation cannot be considered unproblematic (Bryman, 1992: 63), it can provide an increased validity of data (Bryman, 2000: 134) and 'more detail, multi-layered and multi-dimensional perspectives of the phenomenon under study' (Kopinak, 1999: 171).

Nevertheless, this mixed-methodology design does not fall within any of the design categories described in the literature (Lobe, et al., 2007: 15-16) as it does not employ two methods and two stages of data collection. Instead, it employs three methods in a three-staged data collection process. Specifically, the study's three-step research design has the following components.

4.2.1 In-depth interviews with elite actors

The first phase of the empirical research started in 2005 and constituted in-depth interviews with 12 key actors in Greece. These were subjects involved in the domains of policy-making, regulation, industry, research and civic action in the Greek information society. The interviews were conducted in Athens, were face-to-face and translated into English.

The elite actor interviews sought to allow key actors in the field to point out issues of interest to the research of digital divides, without being predisposed to specific matters as in the case of a closed quantitative survey. This methodological decision was also in line with the thesis' aim to explore digital divides not by looking at numbers of diffusion but by explaining such numbers and accounting for phenomena of socio-cultural and political relevance; phenomena which can more easily be traced through qualitative methods of research.

The goal was to provide an overview of the Greek information society and the forces driving digital divides in Greece so as to enable more focused research. The interviews explored the main factors influencing Internet adoption and the processes through which Internet policy and regulation take place in Greece. They emphasised socio-cultural trends and policies or regulations which touch upon social concerns about the Internet. Hence, the first phase of the research qualitatively explored the ways elite actors in the Greek information society perceive Internet policy and regulation, their contentions about the spirit dominating decision-making and their arguments about the dialogue between ordinary people and their culture with decision-making practices in the field. Especially in relation to the dialogue between society's culture and decision-making in the Greek information society, the emphasis was

placed on the role socio-cultural traits play in shaping the mindsets and practices of decision-makers in Greece and on decision-makers' responses to such traits and trends.

The collected interview data were coded and analysed in a systematic way by conducting computer-assisted thematic analysis with the software package ATLAS/ti. This computer package is useful for the thematic analysis of texts (see Section 4.6.1) and, by operationalising the functions it offers, the analysis in this phase paved the way for the next phase where ordinary people's arguments were at the centre.

4.2.2 *Survey of individuals*

A survey of a representative sample of Internet users and non-users was conducted between 20 April 2006 and 31 January 2007. A survey design based on the research objectives, the theoretical framework of the thesis and a series of research hypotheses was employed to explore the main forces influencing digital divides in Greece. The questionnaire was administered by telephone and the Greater Area of Athens (Attica) comprised the survey area for reasons explained later.

The survey sample had the following characteristics:

- males & females;
- aged 15-85 years; and
- permanent residents of Attica.

The decision on a large-scale survey to follow the elite actors' interviews was made on the grounds of the need: first, to review how ordinary people in Greece evaluate the issues raised by the elite actors; second, to trace other important issues and obtain findings which could be generalised to the whole study population; and, third to pave the way for a further qualitative examination of the obtained findings so as to allow an attempt at a comparison and cross-validation of the findings. Thus, the survey can trace behaviour patterns, measurable opinions and most importantly attitudes to the Internet in Greek society. Also, it can shed light on social awareness and evaluations of policies and regulations in the field.

The survey data were analysed quantitatively with the SPSS software. SPSS allows regression, factor analysis and other statistical techniques to be employed and it was used on the basis of careful thinking of the structure and types of questions addressed in the questionnaire and in accordance with the study's aims (see Section 4.6.2). The survey findings were then elaborated qualitatively through the focus groups.

4.2.3 *Follow-up focus groups of surveyed individuals*

Follow-up focus groups of a sub-sample of surveyed individuals were conducted in the first week of September 2007. They were conducted in Athens, were face-to-face and translated into English.

The focus groups with ordinary people aimed to reflect on the survey findings, reviewing and enriching them with qualitative meanings (i.e. a complementary method to the survey). They also aimed to allow comparisons with the findings obtained in the elite actors' interviews, cross-validating all three types of data and showing a possible application of methodological triangulation. Dismissing the view that qualitative should precede quantitative research (Bryman, 1984: 84), I argue that the focus groups allow the thesis to explore the consistency and quality of the survey findings, qualitatively researching the part that society's culture as well as policy and regulation play in ordinary people's decisions to adopt the Internet or not.

In this phase, qualitative indicators were weighted more so that an in-depth understanding of digital divides in Greece could be gained. The data collected in this phase were consistently analysed in conjunction with what the elite actors argued in the first phase of the research and what the quantitative examination of the issues at stake indicated. Thus, the focus groups answered the thesis' key research questions, particularly with respect to possible interconnections between society's culture and decision-making when accounting for digital divides in Greece. The data analysis method I applied was two-layered thematic analysis (see Section 4.6.1).

4.2.4 *Operationalising the research questions*

The principal research questions introduced in Chapter 1 were narrowed down at the end of Chapter 2 as a series of research questions. This chapter operationalises the research questions in sub-questions which are to be explored in one or more of the three phases of empirical research presented briefly above. An exception is the first principal research question (*What are the general characteristics of the Greek information society?*) which introduces the Greek information society and there is no need to narrow down its focus. This first principal question is only examined in the elite actors' interviews as these interviews provide an overview of the Greek information society. As shown in Table 4-1, the other principal research questions (2, 3, 4 in the 'Principal Research Questions' column) were articulated in more specific terms at the end of Chapter 2 as three research questions that fit the conceptual framework of the study (2, 3, 4 in the 'Research Questions' column). In order to empirically examine these three research questions, I break them down further into a series of operationalised questions ('Operationalisation of the Research Questions' column): three

operationalised questions for research question 2; three operationalised questions for research question 3; and two operationalised questions for research question 4.

The number of operationalised questions per research question was determined by the concepts and issues involved in each research question. Also, the level of detail required by the operationalised questions determined whether these questions would be examined in the elite actors' interviews only (i.e. where only a general insight was needed) or in all three phases of empirical research (i.e. where a more detailed and multi-sided account of the issues at stake should be obtained).

Table 4-1: Operationalisation of the research questions and empirical research

RESEARCH QUESTIONS			EMPIRICAL RESEARCH PHASES			
Principal Research Questions	Research Questions	Operationalisation of the Research Questions	1	2	3	
1. What are the general characteristics of the Greek information society? 2. How far does society's culture influence digital divides in Greece? 3. How far do Internet policy and regulation influence digital divides in Greece? 4. How do society's culture and Internet policy and regulation intersect in influencing digital divides in Greece?	Society's Culture	2	2.a What are the cultural characteristics of Greek society of past and current times?	✓		
		2.b More specifically, how do the cultural characteristics of Greek society take shape in the Greek information society?	✓			
		2.c Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?	✓	✓	✓	
	Society's Culture and Decision-making	4	4.a What are the key parameters of the dynamic between society's culture and decision-making in digital divides in Greece?	✓		
		4.b How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?	✓	✓	✓	
	Policy and Regulation	3	3.a What is the general picture and key features of policy- and regulation-making in Greece?	✓		
			3.b More specifically, how does policy- and regulation-making take shape in the Greek information society?	✓		
			3.c What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?	✓	✓	✓

4.3 Phase 1: in-depth interviews with elite actors

This section discusses the individual interviews with elite actors in the Greek information society. Section 4.3.1 presents sampling issues and the themes covered by the interviews. Section 4.3.2 discusses the connections with the conceptual framework and the other methodological elements of the thesis while drawing on the strengths and weaknesses of such qualitative research.

4.3.1 Sampling and thematic guides

The sampling procedure in the in-depth semi-structured elite actors interviews was based on the principle that the number of necessary subjects depends on the study's purpose, as 'new interviews might be conducted until a point of saturation...in current interview studies, the number of interviews tend to be around 15±10' (Kvale, 1996: 102).

I conducted 12 interviews. The number of 12 interviews may be considered sufficient to enable the study to trace themes and factors at work, encouraging the understanding, contextualisation and initial mapping of digital divides in Greece. Nevertheless, this number allows an insightful understanding of the issues at stake as long as the sample is rationally selected. Although small-scale free-style interviewing is not necessary to include representativeness, I attempted to achieve a good spread of respondent characteristics so as to cover the main spectrum of key actors in the Greek information society.

Specifically, the interviewees were selected after making a list of key policy, regulatory, market, civic and research bodies in Greece. Members of those bodies who play a relevant role concerning the subject matter of the research were contacted and, after a first round of telephone communication, 12 of them were selected. The first cycle of interviews took place in April 2005, consisting of eight interviews with policy makers, regulators, researchers and market players in Greece. The second cycle of four interviews took place in September 2005, thus completing the series of 12 interviews. All 12 interviews were conducted after a consent form (Appendix 4-1) had been signed, confirming the confidentiality of the interviews.

The interviews were categorised according to the study's conceptual framework and on the basis of the professional status of each interviewee. Thus, the study resulted in three interview perspectives, each being addressed by a separate thematic guide (Appendix 4-2),⁴⁶ and with each interviewee discussing issues derived from one interview perspective. Table 4-2 below presents the names, expertise and

⁴⁶ The thematic guides allowed some other areas of interest to be brought up.

domain of activity of the 12 interviewees, while it categorises its members in the three interview perspectives.

Table 4-2: Interview sample and perspectives

INTERVIEW SAMPLE EXPERTISE	INTERVIEW PERSPECTIVES		
	Scoping interviews	Bottom-up	Theory-driven
Policy & Regulation			
Vassileios Asimakopoulos (VA), Special Secretary, Operational Program Information Society (OPIS)	<input checked="" type="checkbox"/>		
Manoussos Voloudakis (MV), President of the National Committee for Electronic Commerce & General Secretary of Commerce	<input checked="" type="checkbox"/>		
Costas Balictsis (CB), Director of Telecommunications, Hellenic Republic National Telecommunications and Post Commission (EETI)	<input checked="" type="checkbox"/>		
George Papapavlou (GP), Officer, EC DG Information Society	<input checked="" type="checkbox"/>		
Research	Scoping interviews	Bottom up	Theory-driven
Dr. -Ing. Veronica Samara (VS), SafeNetHome Project (Safer Internet Action Plan)			<input checked="" type="checkbox"/>
Associate Professor Gregory Yovanof (GV), Head of Broadband Wireless & Sensor Networks at the Athens Information Technology Institute (AIT)			<input checked="" type="checkbox"/>
Ioannis Tomkos (IT), Associate Dean, AIT			<input checked="" type="checkbox"/>
Internet Bodies	Scoping interviews	Bottom up	Theory-driven
Nicos Vassilakos (NV), President of the Association of Greek internet Users (EEXI)		<input checked="" type="checkbox"/>	
Elena Spyropoulou (ES), Legal Consultant of EEXI		<input checked="" type="checkbox"/>	
Nikos Frydas (NF), President of SAFENET (the Hellenic self-regulation body) and SAFELINE (the Hellenic Hotline)			<input checked="" type="checkbox"/>
Athena Bourka (AB), Auditor, Hellenic Data Protection Authority (DPA)			<input checked="" type="checkbox"/>
Market	Scoping interviews	Bottom up	Theory-driven
Sophia Parissi (SP), Officer of the Federation of Hellenic Information Technology & Communications Enterprises (SEPE) and Product Manager of FORTHnet (second largest ISP in Greece)		<input checked="" type="checkbox"/>	

The interviews had three types: scoping, bottom-up and theory-driven. For the scoping interviews, which emphasise the scope and focus of the research, four interviewees from the broader policy and regulation domain were selected. All four interviewees were in a position to report on the Greek information society, while representing decision-making authorities within and outside the country. For the bottom-up interviews, which emphasise issues that derive from the web of social actors, three interviewees were selected. All three interviewees were associated with Greek society in general and with the community of Greek Internet users in particular, thus reporting on digital divides due to their grassroots links. For the interviews led by theory, which emphasise issues deriving from the literature, five interviewees were selected. All five interviewees were working on research areas that relate to the benefits, risks and implications of Internet adoption and the ways Greek society perceives them. This category of interviews challenges issues of access and brings to

the fore the critical importance of the interdependencies between cultural and political forces in the shaping of digital divides in Greece.

These 12 interviewees cover the field of experts in the Greek information society, whilst their classification in three interview perspectives allows an examination of all issues of interest from more than one angle. The interviewees' expertise enables the research to address power relations as well as to articulate a complex account of the socio-cultural, policy and regulatory forces influencing digital divides in Greece. Although a series of difficulties was encountered during the sample selection process (e.g. restricted access to key actors in the field; imbalances in the profile of the interviewees as only one representative of the market was interviewed etc), I argue that the sample represents multiple areas of activity and different approaches to the current status of the Greek information society. Thus, this first phase of the empirical research paves the way for the second and most ambitious component of the research design, the large-scale survey discussed in Section 4.4.

4.3.2 Connection with the conceptual framework and other elements of methodology

From a methodological point of view, interviewing has the potential to operationalise a number of concepts and topics. The choice of individual interviews is grounded in the axiom that single cases can facilitate the exploration of the relationship of a specific behaviour to its context (Kvale, 1996: 103), namely of the individual and the socially constructed reality. Also, the employment of a loosely-structured thematic guide, where no standard techniques or rules apply, has the advantage of 'openness', allowing new issues or concepts to be raised and leading the researcher to new paths of analysis (Gaskell, 2000).

The aim of the elite actors' interviews was to map out the field by tracing the major factors that influence the Greek information society in general and Internet adoption in particular. Because of the broad scope of the interviews, certain selectivity was necessary, thus prioritising the themes and issues already raised in the literature and other research. At the same time, this broadness helped the thesis map out the field, spanning all research questions (see Table 4-1) and pointing to the themes and issues for investigation in the next two phases of the empirical research.

Emphasis was given to the role of society's culture, as well as how policy and regulation respond to society's views about the Internet. In this sense, the elite actors' understanding of the ways the Internet is integrated into ordinary people's lives within the socio-cultural and policy context of Greece was explored throughout the first phase of the research. For the purposes of the research, of particular interest were the views of policy-makers and regulators about the ways socio-cultural traits influence the

mindsets and practices of decision-makers in Greece and the ways decision-makers respond to such socio-cultural traits.

Nevertheless, the above thematic rationale cannot entirely make up for the drawbacks identified in the design of this qualitative research; drawbacks somehow inherent in qualitative methodology in general. By interviewing a diverse sample of experts, a lack of focus was brought about, to some extent preventing appropriate contextualisation of the interviewees' arguments. This lack of focus in turn restricted the in-depth analysis of those arguments, allowing the study to merely scratch the surface of issues of the research. The next two stages of empirical research aim to address these weaknesses by carrying out a more focused and detailed investigation of the macro-level findings obtained in the elite actors' interviews.

4.4 Phase 2: Survey of ordinary people

This section presents the design of the large-scale survey of Internet users and non-users in Greece. Section 4.4.1 discusses the criteria determining the selection of a telephone survey as an appropriate data collection method. Section 4.4.2 presents the survey sample and relevant sampling procedures. Section 4.4.3 discusses the survey questionnaire design in light of the research objectives. Section 4.4.4 presents the links with the conceptual framework and the thesis' other methodological elements.

4.4.1 Telephone survey and other data collection methods

Initially, self-completion was selected as the survey data collection method. However, after discussions with experts at the National Statistical Service of Greece (ESYE) I was advised not to use a self-completion questionnaire. Previous experience has shown that response rates in self-administered surveys are particularly low in Greece, preventing reliable and representative findings from being obtained.

In light of this risk, I decided that a telephone survey was the appropriate method. This decision was made on the grounds of the following administrative, sampling and data quality considerations (Frey, 1989):

- Pragmatic limitations imposed by time, resources and equipment favoured the selection of the telephone method. Telephone interviewing is comparatively the most cost- and time-efficient data collection method, being appropriate for an individual project like this. This is so because mail surveys are cost-efficient only and face-to-face surveys require extremely large budgets.

- In sampling terms, the telephone method ensured that the critical mass of the Greek population residing in the region of Attica would be included in the sample frame, as only 2-3% of the population do not have a landline in Greece. Also, the big majority of the Greek population still lists their telephones in public telephone directories. Finally, the problem of double-listed telephones was overcome as the telephone and address contacts were drawn from the latest population database of the ESYE and matched with the most recently updated regional telephone catalogue.
- Telephone interviewing is more effective than mail surveying in producing high response rates,⁴⁷ especially when also sampling within households (Frey, 1989: 58-9). Given that the thesis aimed to achieve a response rate of between 70-75%, only telephone and face-to-face strategies could be considered.⁴⁸ Although face-to-face interviews usually bring higher response rates than telephone interviews, some studies report similar rates (Groves and Kahn, 1979). For the present research, a pre-interview letter (Appendix 4-3) introducing the research was posted to the desired sample to encourage higher response rates. Also, the geographical scope, the urban area of Attica, was a means to minimise response biases stemming from low response rates as telephone interviewing works better in urban than in suburban and rural areas (Fowler, 1993: 60).
- In terms of data quality, telephone interviewing has a comparative advantage as data collection can be easily controlled by the researcher, reducing distortion from the interviewer's performance (Frey, 1989: 62-4). On the other hand, a telephone survey is more likely than a self-completion questionnaire to produce socially desirable answers (Fowler, 1993: 58-9). Aiming to improve data quality, the study employed Computer-Assisted Telephone Interviewing (CATI) software. In general, CATI allows timesaving, ease of question management and rapid data compilation, while it enables the identification of any inconsistent data, increasing data quality (Frey, 1989: 68; *ibid*: 62-4).

As Table 4-3 shows, the telephone method has strengths and weaknesses, requiring a careful and well-planned design. In Frey's words (*ibid*: 75): '...there have been a considerable number of improvements in sampling procedures, questionnaire design, and administrative practice for telephone surveys...' reinforcing the appropriateness of this method for the thesis.

⁴⁷ The response rate is the number of completions compared to the number of potential respondents including eligible and excluding non-eligible and reachable respondents. The refusal rate is the proportion of eligible respondents contacted who declined to be interviewed (Frey, 1989: 50-3).

⁴⁸ The response rate is an important indicator as low response rates introduce response bias which might differentiate the characteristics of the initial sample, questioning the credibility of the findings.

Table 4-3: Advantages and disadvantages of telephone survey

Advantages	Disadvantages
Lower costs than face-to-face interviews	Sampling omitting those without telephone
Random Digit Dialing (RDD) sampling of general population	Nonresponse associated with RDD. Sampling is higher than in face-to-face interviews
Easier access to certain populations – compared to face-to-face interviews	Questionnaire or measurement constraints (limits on response categories, on use of visual aides & on interviewer observations)
Shorter data collection periods	Less appropriate for personal or sensitive questions if no prior contact
Advantages of interviewer administration – compared to mail surveys	
Interviewer staffing and management easier than with face-to-face interviews	
Better response rate compared to mail surveys	

4.4.2 *Sampling design: a two-stage probability sample*

One critical aspect of survey design is sampling. In telephone surveys, sampling depends on whether probability-sampling procedures are implemented and available lists or telephone directories are used instead of Random Digit Dialing (RDD).

Sampling from a population list and telephone directory

The respondent selection in the thesis was primarily based on the latest population list of the ESYE. The selected telephone numbers were matched with the latest publicly available telephone directory for the Attica region.⁴⁹ The aim was to collect from a final number of 1,000 questionnaires from eligible members of sampled households.⁵⁰

This procedure allowed the study to encounter the problem of duplicate listings when population lists are used (Frey, 1989: 82-3). The ESYE population list meets satisfactory population coverage as it is updated twice a year. Through matching household names, postal addresses and phone numbers with the latest telephone directory, the study is able to discover unlisted numbers. However, this procedure does not keep track of the latest phone number changes. Also, under-coverage in telephone directories⁵¹ and the exclusion of households with frequent mobility are limitations which cannot be addressed by such a procedure.

⁴⁹ In this way, even if the list is not fully updated we can obtain the missing numbers through a telephone directory. This strategy can also solve problems such as double-recorded numbers.

⁵⁰ The sample size is determined by confidence intervals (ibid: 92), and the sampling error estimates can be reduced by multiplying them with the value $1-f$, where f =the fraction of the population included in a sample (Fowler, 1993 33-5).

⁵¹ RDD is not suggested for this survey as it is problematic for sampling within small areas where telephone exchanges do not correspond to area boundaries (ibid: 23-40).

The regional limitation of Attica can be justified in pragmatic and epistemological terms. On one hand, an individual project often cannot reach a nationally dispersed sample for time and money limitations. On the other, the survey's goals relate more to exploring ordinary people's attitudes to the Internet and the respective decision-making mechanisms, rather than to measuring Internet penetration per se. Hence, the selection of the urban region of Attica where Internet penetration appears higher (25-35%) than in the rest of Greece (19-25%) allowed the study to obtain a sufficient number of completed questionnaires from users and to conduct a quantitatively sustainable data comparison for both groups of users and non-users.

Systematic sampling and sampling error

The thesis applied systematic sampling as it is easily adjustable to local and regional samples (ibid: 87) and ensures the same precision as random sampling, while being less laborious and better organised. By using a population list consisting of households units and deciding about the sample size, the division of the latter by the former gives a fraction (i.e. $1,000/1,000,000 = 1/1,000$). This fraction determines the starting point of the randomised selection of a number (i.e. a number from 1 to 1,000). Given that, the sample selection proceeds by selecting every 1,000th household on the list (Fowler, 1993: 14-5).

Sample design affects sampling error.⁵² The first step is to calculate the error for a simple random sample and then to calculate the effects of any deviations from a simple random sampling design. Although RDD is perceived as producing lower error (ibid: 31-3), sampling error is part of the survey design where the sample frame, probability character and size of sample, along with the distribution of what is being estimated, matter (ibid: 35-6).

Sampling within households

A second stage of sampling took place within households where eligible respondents had to be identified. This is necessary in order for a probability sample to be created and every member of the study population to have a non-zero chance of being selected (Frey, 1989: 105). When implementing sampling within households, two criteria were used:

- a) Household over 15 years: this is a convention in most surveys where the general population is the target population.
- b) The household member who had the last birthday: this is a probability technique where the 'last/next birthday' criterion is assigned randomly. This has the

⁵² Sampling error for random samples: the statistic of a standard error of a mean (a proportion) by calculating the variance of the statistic of proportion (the percentage of the sample that has a characteristic) and dividing it by the sample size (ibid: 28-9).

advantage that ‘every member having an equal chance of selection, numbers are not wasted because every household has someone with a last (or next) birthday’ (ibid: 113).

Weighting procedures apply where a household contains more than one eligible member. Thus, a probability sample is ensured and no particular category of the study population is favoured, making the use of quotas unnecessary. At the same time, I did not select people with an intrinsic interest in the research. Hence, the target sample consisted of individuals aged over 15 and its spread equally covered the main socio-economic and demographic categories of the population.⁵³

Sample characteristics and weighting factors

In order for the final sample to be representative of the regional population, the following weighting factors were applied in line with the real distribution of the population aged 15-85 years in Attica:

Table 4-4: Weighting factors

Age group	Total	Male	Female
15-24	17%	9%	8%
25-34	20%	10%	10%
35-44	18%	9%	9%
45-54	16%	8%	8%
55-64	12%	6%	6%
65-74	11%	5%	6%
75-85	6%	2%	4%
Total	100%	49%	51%

This weighting aimed to remove demographic biases such as the over-coverage of females, the participation of a large number of people aged 25-39 and the fact that very few people aged 65+ responded. Also, a larger sample of people with children and a more even distribution across all education levels was desirable. Thus, I measured and analysed the following weighted sample:

⁵³ How socio-demographics affect Internet adoption is analysed in Chapters 6 & 7.

Table 4-5: Sample demographics (%)

Sample characteristics	Answer alternatives	Non-Weighted	Weighted
Gender	Male	39	49.5
	Female	61	50.5
Age	15-24	18	17.2
	25-39	34	30.5
	40-64	37	36.2
	65+	10	16.2
Education	None, or grades 1-8	5	6.4
	High school incomplete	16	17.4
	High school graduate	32	29.6
	Business, Technical, or vocational school	12	12.6
	Some college, no 4-year degree	7	6.3
	College graduate	21	20.8
	Postgraduate training	5	5.4
	Don't know/Refused to answer	1	1.5
Family income*	Less than 10,000 euros	9	9.7
	10,000 to under 29,999 euros	19	20.3
	30,000 to under 49,999 euros	3	3.2
	50,000 to under 99,999 euros	0	0.4
	100,000 or more euros	0	0.1
	Don't know/Refused to answer	67	66.2
Children in the household	Yes	52	53.3
	No	47	44.9
	Don't know/Refused to answer	1	1.7
Total (%)		100	100

Base: N=1001, *Family income before taxes

- 61% of the respondents are females and 39% are males.
- 18% of the respondents are 15-24 years old, 34% are 25-39 years old, 37% are 40-64 years old and 10% are 65+.
- 67% of the respondents refused to reveal their family income, 28% belong to the two lowest economic groups (under 29,999 euros in annual family income), whereas only five respondents stated that they annually earn more than 50,000 euros⁵⁴.
- 5% of the respondents have either no education or up to primary education, 16% have not completed high school, 32% are high school graduates, 19% have finished some vocational school or college, 21% are university graduates, and 5% have received some postgraduate training.
- 52% of the respondents are in households with children and 47% are in households without children.

The response rate and how to reduce non-response

In contrast to sampling error, a high non-response can bias the sample significantly (Fowler, 1993: 39).⁵⁵ Even response rates in the 60% to 75% range can have

⁵⁴ It seems that the respondents considered the question about income quite sensitive, while nearly all who answered this question identified themselves with the lowest income groups.

important effects on sample estimates even if non-response is biased only modestly as some variance between the surveyed sample and the study population occurs.

The response rate anticipated in the study was between 70-75%. Estimating that 97-98% of the Greek population in Attica has a telephone, the best estimate of the percentage of the population represented in the sample was .97-.98 times the response rate for a telephone survey.⁵⁶ With respect to enlisting co-operation, which is a second parameter affecting response rates, one should expect a high non-response rate from less educated and elderly people.

Although I do not know whether and how much the non-response is biased, I had to ensure a reasonable response rate. Therefore, the following strategies to reduce non-response were applied as an integral element of the survey design:⁵⁷

- a) Numerous calls; 5-6 calls at a minimum, concentrating on evenings and weekends.
- b) An informative letter was sent in advance to inform and prepare the selected households about the survey (see Appendix 4-3).
- c) Respondents were asked to become informed about the survey purposes before refusing to be interviewed. In the case of a final denial, another attempt was made whereby an adjusted refusal inversion introduction was used (see Appendix 4-4).
- d) Respondents who initially refused to participate were contacted again at a later date. If the eligible respondent refused to be interviewed, an appointment for another day/time had to be pursued when an adjusted call back introduction was used (see Appendix 4-5).
- e) The purposes of the survey were presented in the introduction of the questionnaire (see Appendix 4-6) and before the actual enlistment of co-operation of the eligible individual.
- f) Skilful, communicative and experienced interviewers were employed. For this survey, one experienced interviewer and myself conducted the interviews.⁵⁸

By following these strategies, I obtained a response rate close to 70% (67.4%), which is acceptable and sufficient for the thesis' aims.

⁵⁵ The response rate is the number of surveyed units divided by the number of sampled units. Units that are not finally selected (non-eligible) are not included (ibid: 39).

⁵⁶ Numbers that do not work or do not serve residential units were excluded from the response rate.

⁵⁷ Some of these strategies are suggested by Fowler (ibid: 44).

⁵⁸ I briefed the second interviewer during which time all questions were explained and all queries were answered through specific examples. Following the briefing, the interviewer conducted two real interviews and discussed them with me.

4.4.3 Questionnaire design: the science and art of design

The science of questionnaire design

A questionnaire has to conceptualise the research questions in the form of important factors, expected associations, patterns of behaviour, attitudes and opinions (Frey, 1989: 117). Therefore, the following steps proposed by Fowler (1993: 95) were taken when designing the questionnaire for the present study:

- a) *Definition of survey objectives:* the survey explored the operationalised research questions (see Table 4-1) by setting a series of relevant hypotheses. The hypotheses tested in the survey were the following:
 - i Digital divides in Greece are highly associated with cultural and everyday settings of life (2c operationalised research question);
 - ii Digital divides in Greece are highly associated with Internet policy and regulation (3c operationalised research question);
 - iii People's culture and everyday settings of life have a two-way interaction with Internet policies and regulations, which determines digital divides (4b operationalised research question).
- b) *Definition of questionnaire themes:*⁵⁹ the themes addressed by the questionnaire were closely related to the conceptual framework, the research questions and hypotheses of the study. The questionnaire explored the following three themes.
 - i Internet use and attitudes to the Internet in association with traditions and everyday settings of life (hypothesis i);
 - ii Internet use and attitudes to the Internet in association with the evaluation of EU and national Internet policy and regulation (hypothesis ii);
 - iii Evaluation of national and EU Internet policy and regulation in association with everyday settings of life (hypothesis iii).
- c) *A list of variables to be measured:* indicators to be explored and respective variables to be measured are set at this point. In the present research, the three questionnaire themes were operationalised in a range of questionnaire topics⁶⁰ which were in turn addressed by one or more variables.⁶¹ These variables were measured via four main types of questions: factual, opinion, attitude/opinion and awareness/knowledge.

⁵⁹ The questionnaire and a script of instructions for the interviewers are provided in Appendix 4-7.

⁶⁰ Examples of topics: patterns of Internet use; attitudes to the Internet in relation to everyday life; people's evaluation of national and EU policy and regulatory schemes etc

⁶¹ Examples of variables: frequency of Internet use; activities on the Internet; reasons for non-use; the Internet as a threat to users' security; the Internet as a danger for social traditions; the accountability of national and EU authorities; the awareness of Greek authorities; awareness of laws and policies on the Internet etc.

- d) *An analysis plan* of how the variables are measured: at this point, it is important to define which variables are dependent, which are independent allowing the capture of distributions and patterns of association, and which are used as control or intervening variables to explain patterns and check competing hypotheses. Although certain alternatives in the treatment of the variables are always part of the analysis process, I already had a relatively good idea about the variable associations I wanted to test and the models I wished to run as part of multivariate statistical analysis. More information about the data analysis process is provided in Section 4.6.

The art of questionnaire design

Besides the questionnaire design process, the questionnaire was structured and worded so that it could secure the neutral character of the interviews and facilitate the respondents' response task.

Introducing and ordering the questionnaire

As suggested for telephone interviews (ibid: 99), the questionnaire begins with an introduction and continues with warm-up questions, asking specific topics in the middle and closing with routine demographic questions (see Appendix 4-7). Regarding the question sequence,⁶² I grouped the questions in six thematic areas, some concerning Internet users, others concerning non-users and some posed to both groups. Also, I followed the general-to-specific question sequence in order to facilitate the response task (Frey, 1989: 154). Finally, transitional statements were used to keep the conversational tone of the interviews and to help respondents follow the shift to new topics (ibid: 147).

Writing and wording of questions

Answers are meant to be good measures when the question(naire) is carefully designed (Fowler, 1993: 69-70). In this respect, I made the following decisions:

- a) Three types of questions were asked: knowledge, attitude/opinion and behaviour. The validity of data can be ensured with respect to questions that trace behaviours. The validity of those concerning subjective emotional states can be increased when examining correlations with other answers (ibid: 80)⁶³.
- b) The majority of questions were standardised and, in most cases, had up to five response categories. Closed questions allow the respondent to perform the response task more reliably and the researcher to analytically interpret the answers (ibid: 82-3).

⁶² The question sequence affects the response error. For more, see Frey, 1989: 147-151.

⁶³ The distribution of answers to a subjective question cannot be interpreted directly; it only has a meaning when differences between samples are compared (i.e. users and non-users) or when an association among answers to different questions are looked for (Fowler, 1993: 91-2).

- c) In terms of measurement, the majority of questions were ordinal. Nominal questions followed and only a few cases of interval-ratio questions were asked. This is because most questions measured behaviour or attitudes.
- d) Finally, the questionnaire has: (1) conventions that differentiate the words the interviewer reads to respondents from the instructions; (2) instructions to skip questions; and (3) all the words that the interviewer has to read.

Field pre-test of the questionnaire and questionnaire finalisation

The survey instruments were tested by interviewing 20-25 respondents. The subjectivity of the interviewer made the employment of one of the strategies broadly suggested necessary (ibid: 100-102). Specifically, I filled out a rating form on each question with respect to whether the question was easy to be read as worded, and whether respondents understood the question in a consistent way and answered it accurately.

After the pre-testing, a final evaluation and amendment of the survey instruments was carried out. After I approved the final version of the questionnaire, 200 pilot interviews were conducted in the first 2 months of the data collection (20/04/-20/06-2006). This ensured the even flow of the questionnaire and that all questions were understood in the same way by all respondents.

4.4.4 Connection with the conceptual framework and other elements of methodology

The survey design was based on the findings obtained from the elite actors' interviews and in tune with the thesis' objectives. Although qualitative research is prominent in the field (Haddon, 2006: 8), some examples of surveys can be found in the domestication tradition, Belgian research on non-adoption (Punie, 1997) and on SMEs (Pierson, 2005). Also, complementarity and/or the triangulation of qualitative and quantitative methods are gaining increasing popularity among researchers, as also espoused in this thesis.

Implementation of the survey design delivered a quantitative analysis that provided a measurable picture of Internet users' and non-users' attitudes, emphasising the potential influence of socio-cultural and decision-making parameters. The survey espoused the two main, theory-driven, analysis angles: first, that looking at the forces affecting people's decisions to adopt the Internet and their attitudes to the medium, focusing on the role of everyday life and resistance culture; second, the perspective of social awareness and evaluation of Internet policy and regulation in Greece.

In relation to these thematic foundations, the survey sample consisted of Internet users and non-users. On one hand, users allow a picture of the limited Internet adoption in Greece to be outlined and insightfully connected to the ways in

which policy and regulation respond to users' concerns about the Internet. On the other, non-users constitute the big majority of the Greek population, accounting for the influence of cultural traits as well as for the barriers to digital inclusion which policy and regulation aim to address.

Nevertheless, the survey offers a quantitative picture of patterns and forces of digital divides in Greece, lacking a qualitative evaluation of how these patterns and forces lie in complex socio-cultural and political contexts. Thus, the survey findings were enriched and reviewed by interviewing a small number of individuals in a focus group setting.

4.5 Phase 3: Follow-up focus group interviews

In the last phase of the research I conducted focus groups. Section 4.5.1 examines the rationale of the research design, outlining the sample and thematic guides of the focus groups. Section 4.5.2 looks at how these interviews are connected to theory and the previous two methodological elements.

4.5.1 Sampling and thematic guide

Sampling

Four focus groups were interviewed. The decision about the number of groups relied on the consideration that the study should be informed by at least more than one group of Internet users and non-users, while I drew on other examples of research and on practical matters concerning time and budget constraints. The rule of thumb that 'one should continue to run new groups until the last group has nothing new to add' (Lunt and Livingstone, 1996: 7) was also taken into consideration. Nevertheless, this rule is hardly applicable as each group has its own identity and new discourses can be articulated continuously, particularly when the study population is diverse and internally inconsistent.

The sample recruitment process was based on the second phase of research, when surveyed individuals were asked to give their consent to be interviewed at a later stage. Over 300 surveyed individuals gave their consent and some of them were randomly contacted by phone and asked to participate in the interviews. Thus, I selected 24 individuals to constitute four groups, namely six individuals per group. The four groups were equally divided between Internet users and non-users, being more or less proportionate to the percentage of users and non-users surveyed in the second phase.

Regarding demographics, socio-demographic diversity was established. 'Internet usage' was the only criterion of the sample selection and group formation, with each group consisting of either Internet users or non-users. No limitations were posed on the socio-demographics of the sample since collecting insights from different demographic categories of the population was one of the aims of the interviews. The sample's socio-demographic characteristics are presented in the following table:

Table 4-6 Sample demographics

	Name	Age	Gender	Profession	Family status
1 st group of users	Stefanos	32	Male	Investment analyst	Single, no children
	Myriam	27	Female	Postgraduate student	Single, no children
	Apostolos	44	Male	Civil servant	Married, one child
	Agapi	35	Female	Decorator	Single, no children
	Ioanna	72	Female	Pensioner	Married, two children
	Petros	19	Male	Military service	Single, no children
2 nd group of users	Antonios	44	Male	Self-employed	Married, one child
	Eirini	32	Female	Accountant	Single, no children
	Pantelis	25	Male	Postgraduate student	Single, no children
	Anastasia	27	Female	Teacher	Single, no children
	Kwnstantina	55	Female	Administrator	Married, two children
	Michalis	17	Male	Student	Single, no children
3 rd group of non-users	Antonia	33	Female	Self-employed	Married, no children
	Dimitrios	18	Male	Student	Single, no children
	Maria	45	Female	Housewife	Married, 3 children
	Konstantinos	62	Male	Plumber	Married, 2 children
	Andreas	50	Male	Doctor	Married, 1 child
	Dionysia	36	Female	Saleswoman	Single, no children
4 th group of non-users	Ioannis	25	Male	Civil engineer	Single, no children
	Evangelia	29	Female	Shop owner	Single, no children
	Anna	38	Female	Teacher	Married, two children
	Petros	39	Male	Receptionist	Married, two children
	Menios	47	Male	Waiter	Married, three children
	The 6 th member of the group did not show up				

Thematic guides

Two thematic guides were employed in the discussions with the groups of users and non-users (see Appendix 4-8). These guides aimed at a qualitative examination of the topics explored quantitatively in the survey and were based on the grounds set by the elite actors' interviews.

On one hand, the focus groups aimed to dig deeper into the survey conclusions concerning society's culture and decision-making in relation to Internet adoption in Greece. In the focus groups, particular emphasis was placed on discourses concerning 'life circumstances', 'choice', 'priorities' and 'identity' so as to contextualise, complement and cross-validate the complex web of factors that determine users' and non-users' attitudes to and practices on the Internet. The following questions occurred in the survey analysis and were examined further in the focus groups: what are the everyday culture parameters that determine users' and non-users' attitudes to and practices on the Internet, and why?; why are households with children less likely to adopt the Internet?; how do people understand the role of their age, education and other demographics with respect to the Internet?; how do users and non-users understand Internet policy and regulations and how does this influence their attitudes to and practices on the Internet?; and how can we explain the linkages of everyday life and resistance culture with Internet policy and regulation?.

On the other hand, part of the focus groups was dedicated to the elite actors' discourses so as to trace the degree of complementarity and cross-validate the qualitative data obtained from different research subjects. More specifically, the focus groups were asked to respond to the following elite actors' discourses: the technophobic, non-technocratic and traditional character of Greek society; ignorance and a lack of awareness in Greek society; social inactivity; the failure of Greek authorities to implement EU policies and regulations on the Internet; the non-modernised, delayed, techno-phobic and bureaucratic public administration in Greece; the need for more socially accountable and human-centred policies and regulations; the high cost of Internet services and networks; the lack of an Internet infrastructure and satisfactory services.

The discussions in the focus groups were loosely structured. The interpersonal relation between the interview situation and any matters arising during the interviews can always alter the initial thematic framework. The present research follows the principle that when conducting interviews, 'you can adapt as the situation changes. If a promising topic comes up, you can pursue it' (Berger, 1998: 57). Also, particular emphasis was placed on how participants in the focus groups reflected on their attitudes and practices through the interactions emerging and the convergence or divergence of arguments within each group.

Hence, the setting of the interviews and the way in which they were organised aimed to contribute to the openness and loosely structured character of these discussions. The interviews were conducted in quiet public spaces and were audio recorded. I adopted the role of a moderator, attempting to probe interactions while being cautious about my interference in the discussions. In order for the discussions to be managed efficiently, another person was the note keeper. This allowed me to focus

on my role as a moderator, while ensuring that interactions throughout the interviews were traced more efficiently. Each interview lasted 2-3 hours, while the interviews with users were roughly half an hour longer due to the greater interactions within the user groups.

4.5.2 Connection with the conceptual framework and other elements of methodology

In the domestication tradition qualitative research is broadly accepted in the study of everyday life (Haddon, 2006: 199) as it enables social discourses and meaning construction to emerge in context. However, the domestication tradition rarely exhibits examples of studies that use focus groups. In Haddon's words: 'I can't think of any examples of people using a domestication analysis and focus groups...' (email communication, 12 July 2007). One exception might be Livingstone's work on children, family and the media (Livingstone and Bober, 2003; Livingstone and Bovill, 2001 & 1999), although this focuses on media usage by children and the family. Liebes and Katz's study (1990) on the family use of TV is another example of focus group interviewing, even if it does not belong to the domestication tradition.

Also, it has been argued that the qualitative can often complement the quantitative (Silverstone, 2005) and the thesis dismisses the rule of thumb that the qualitative usually constitutes 'a source of ideas for quantitative testing'. In the present research, the focus groups aimed to provide answers to all three research questions, connecting with the previous two phases of the research and carrying the arguments firmly forward. The focus groups were to give more depth and exploratory power to the quantitative findings, while achieving integration with the qualitative findings obtained in the elite actors' interviews.

More specifically, the focus groups went beyond quantitative groupings and classifications of ordinary people's views, providing a less quantifiable picture of digital divides in Greece. They provided some space for tracing the thread of users' and non-users' thinking and for identifying emerging themes. They were seen as the appropriate technique for further investigating the hypotheses tested in the survey and developed out of a restrictive theoretical perspective. They thus enabled a deeper analysis of people's behaviours and attitudes, of the associated role of everyday settings of life and the particular role of policies and regulations by reflecting on citizens' discourses and complex interactions in the interview process. In this way, the complexities and uncertainties that the study of technology and its social embeddedness encompasses were disentangled to a certain degree.

Focus groups collect views that capture 'public discourses and interpretive communities' (Lunt and Livingstone, 1996: 4). They facilitate interactions between group members, allowing for 'collective' views to emerge throughout group

interactions. The emphasis is on the power relations and hierarchies lying within the conversation structures, with the researcher being able to say more about the collective points of view (Gaskell, 2000: 46-7; Holstein and Gubrium, 1997: 120). Focus groups fail to say a lot about the individual situation, whereas rich conclusions can be reached about the 'group culture' (Alasuutari, 1995: 94). Thus, focus groups were selected precisely because the thesis goes beyond the household boundaries and explores culture at the level of civic life and in certain societal formations. Even though focus groups do not allow generalisations, it was anticipated that they would bring up the nuances of the cultural traits of Greek society that the survey tested and the elite actors had pointed out.

As regards the study of the everyday in particular, focus groups provide the appropriate discursive means to approach 'everyday' from an 'everyday' perspective (Lunt and Livingstone, 1996: 9). Burgess et al. (1991: 502) argue that focus groups 'provide a means of replicating some of these [everyday] social interactions although, inevitably, the settings within which they are conducted and, crucially, the ways in which they are conducted, are much less naturalistic'. By qualitatively approaching a sub-sample of surveyed individuals, this micro-level of research provided more explanatory means than the survey for exploring social knowledge, social awareness and people's experiences with the Internet. It also provided explanatory means for exploring the ways ordinary people in Greece perceive the role of Internet policy and regulation within their everyday settings of life.

This phase of empirical research was also expected to allow integration with the first phase of data collection and for appropriate links and connections between all three phases of the research to be attained. This is in line with the overarching goal of the thesis to provide diverse empirical data that allow a research-based dialogue between different agents and activity domains in the Greek information society. From a methodological perspective, the thesis thus became able to deliver a working case of complementarity and methodological triangulation for further elaboration and development.

4.6 Data analysis and administration

Different types of data require different analysis strategies. This is so the data can inform and cross-validate one another, while the research can identify contradictions and new insights from a topic and research subject perspective.

4.6.1 *Analysis of qualitative data*

A thematic analysis was employed for analysing the elite actors' and focus groups' interviews, albeit through different analytical strategies.

1st Phase: Computer-assisted thematic analysis

When qualitative data are collected, namely a 'text', one option of analysis is the positivist 'factist perspective' (Alasuutari, 1995). In this case, the data are treated as a reflection of reality and source of information about facts, phenomena and real situations. This perspective can be called thematic, as language, intangible situations and latent factors are not considered. On the grounds of the thesis' objective to at this stage provide a broad and comprehensive outline of digital divides in Greece, a thematic analysis was considered the appropriate analysis technique for the elite actors' interviews.

All 12 interviews were transcribed and made available in an electronic format. The interview texts underwent a detailed thematic analysis through systematic coding with the assistance of the ATLAS/ti computer software package.⁶⁴ Through ATLAS/ti, networks of arguments (codes) were identified in the interview texts. These networks brought up relationships and hierarchies of complex phenomena in the Greek information society. As a result, I built up a thematic framework consisting of the following six themes:

1. *The information society in Greece.* This theme explored the traits of the Greek information society and tackled issues of infrastructure, market operation, policy and regulation, as well as indicators of technology adoption.
2. *Cultural drivers in the Greek information society.* This theme focused on everyday life and the cultural drivers of the Greek information society.
3. *EU regulation drivers in the Greek information society.* This theme dealt with the EU telecommunications regulation in 2003 and the consequences of its non-implementation in Greece. The aim was to contextualise and comparatively view decision-making in the Greek information society.
4. *Policy and regulation drivers in the Greek information society.* This theme made more specific references to Internet policy and regulation in Greece, with the interviewees highlighting the links between society's culture and official decision-making ideas and practices.
5. *Other forces at work.* In addition, market, media and education forces were brought up in the texts. This theme completed the picture of the Greek information society, raising additional parameters that matter for digital divides.

⁶⁴ Because the interview texts were lengthy, the use of ATLAS/ti was a major benefit. A hermeneutic unit was created, all twelve interview texts were inserted into that unit and dominant themes were identified in the texts through systematic coding.

6. *Critical reflections.* Lastly, the analysis provided reflections on the interview texts and the atmosphere of the interview discussions. These reflections are not of a purely thematic interest as they pointed to interview discourses and to the interview process as a whole.

Each theme consisted of a series of networks of arguments that interconnected, and Chapter 5 (Sections 5.3-5.8) presents and discusses them in detail. Each theme aimed to answer one or more research questions as operationalised in Table 4-1 (see Chapter 5, Section 5.9). However, these themes are the product not only of the topic guides used in the interviews (Appendix 4-2) but also of the particular arguments put forward in the interview texts. Also, this thematic framework does not include all issues raised in the interviews, with a presentation of the findings in Chapter 5 following an equally selective strategy. Finally, the themes and findings discussed in Chapter 5 are not set by significance since the interviews aimed to map out the field and pave the way for more focused research in the second and third phases.

3rd phase: A two-layered thematic analysis

As regards the analysis of the focus groups, on the first layer the thematic analysis addressed questions of 'what' and 'why' on the grounds of the thematic structure of the topic guides that directed the group discussions (Appendix 4-8). On the second layer, the interview discourses were examined in relation to the contextual and power-related forces, thus resulting in a contextualised analysis of the patterns of behaviours and arguments emerging in the texts. Aiming to go beyond the specific structures of text, the analysis in Chapter 8 relates text (focus group discourses) to structures of the socio-political context. The analysis aspired to disentangle the interactions between focus group discourses and socio-political contexts that relate to the forces driving digital divides in Greece. To understand and interpret the interview discourses, I placed the texts in context and employed the following analytical terms:

- **Reflectivity:** thinking about what is said and the context of its production, including circumstances (e.g. everyday life circumstances) and policy context (e.g. links between personal experiences on/with the Internet and policy or regulatory forces).
- **Reflexivity:** considering how one's position in society impacts upon what one does and how one interprets things (e.g. the impact of a profession, lifestyle etc. on people's understandings of the Internet and its importance).
- **Dialogue:** the collaborative constructing of understandings was something that was greatly facilitated in the focus groups. The focus in the present research was on contradictory, contrasting or converging arguments provoked by and articulated through dialogue.

- **Comparison:** comparing discourses on the same topic, with attention to similarities, differences and implications (e.g. how similarly or differently users reflect on the same topic and what that means for their positioning in the broader socio-political context).

These analytical terms were used to complement the first-layer thematic analysis that answered the questions of ‘what’ and ‘why’. Thus, the findings obtained through this mode of analysis aimed to build a coherent framework of discourses and arguments in context.

In procedural terms, the interview texts were saved in Word format and, due to the limited number of texts, it was decided that no software was needed for their analysis. Instead, a series of grids of interview arguments were created with the assistance of Excel Office. These grids are provided in Appendix 8 and summarise the interview discourses for both users and non-users groups and on the grounds of the thematic structure of the interview discussions. Besides the grids, the analysis process relied on many readings of the interview texts and on the insertion of comments in relevant Word files. Then, the traditional mode of ‘text highlighting’ applied when reading the interview discourses carefully and observing the interactions of the discourses with external socio-cultural and political parameters.

4.6.2 *Administration and analysis of quantitative data*

As regards the survey, it is worth presenting the biggest administration and implementation issues before the data analysis strategies are discussed.

Administration and implementation

I used a centralised location of telephone surveying and Computer-Assisted Telephone Interviewing (CATI)⁶⁵ in order to speed up the data collection process and improve the quality of the questionnaire’s administration. The finalisation of the required budget, implementation of sampling procedures, installation and running of CATI software (IT by DESAN), interviewer’s training, posting of pre-letters to households, organisation of a small call centre and the time schedule of the interviews were some of the tasks involved in the survey administration. In order for these tasks to be implemented, I set the following timelines:

⁶⁵ CATI is for large-scale surveys where filter and skip questions apply (Frey, 1989: 205-15).

Table 4-7: Implementation timelines

Task/due	Dec 05 2H	Jan 06 1H	Jan 2H	Feb	Mar 1H	Mar 2H	Apr 1H	Apr 2H	Jun 1H	Sep- Nov	Jan 07
Survey organisation	■										
Defining the data collection method	■										
Defining sample size		■	■								
Survey design & budget estimates				■	■						
Administration *						■	■				
Sample selection							■				
Pilot interviews							■				
1st phase of interviews								■	■		
2nd phase of interviews										■	
Completion											■

* Installation and running of CATI software, interviewer training, posting of pre-letters, organisation of the call centre etc.

Two interruptions occurred in the data collection during holiday times. This is because in the urban region of Attica most people travel to rural regions in holiday times. During data collection, a large number of contacts were made⁶⁶ and N=1001 interviews were completed (Table 4-8):

Table 4-8: Contacts and phone calls

Complete	1001	14.6%
Busy line	94	1.4%
No answer	1260	18.3%
Refusal	2115	30.8%
Wrong/non-existing phone number	792	11.5%
Fax/computer	115	1.7%
Ineligible person	651	9.5%
Secret number	2	0.0%
Business/public services	449	6.5%
Ineligible person due to age	239	3.5%
Do not know if he/ she uses a PC or the Internet	105	1.5%
Absence of an eligible person	31	0.5%
Interview closed halfway due to fatigue	11	0.2%
Interview closed halfway due to hurry	2	0.0%
Interview closed halfway due to refusal to answer specific questions	4	0.1%
Interview closed halfway for other reasons	2	0.0%
Total	6873	100.0%

Data analysis: descriptive and modelling statistical techniques

After the completion of the data collection the open-ended questions as well as 'Other' were grouped and coded by me. Since all the data were available electronically, they were transferred to QUANTUM (data processing programme) so as to be cleaned up and edited electronically. A tabulation of the data was generated and I checked the

⁶⁶ In order to keep track of the interview status, I used an electronic call record sheet where every number and call statuses were recorded.

tables on a logical level so as to identify any contradictions. Once the final tables were produced, all the data were transferred to SPSS 15.0 software.

In order for the survey hypotheses to be tested (see Section 4.4.3), I applied descriptive (frequencies, cross tabulations, means etc) and simple testing techniques (e.g. chi-square statistics etc), as well as the following modelling techniques:

a) Multiple Linear Regression

Multiple linear regression is used extensively in my analysis and is employed when the response variable is a non-dichotomous, continuous, interval-level variable, and the explanatory variables are of any type. Because more than one explanatory variable is used at once, this technique has the advantage that even tentative claims that the effect of a variable on the response variable is causal can be put forward only if this effect survives conditioning on all control variables which are thought of as relevant.⁶⁷

As Chapter 7 explains in detail, the interpretation of the regression outputs takes the coding of each variable into account. For example, 'frequency of Internet use' was coded so that lower levels implied a higher frequency of use (1 represented the highest frequency and 7 represented the lowest one). An F test was used to assess whether all the coefficients of the independent variables were jointly equal to zero, and T-test statistics were used to assess the significance of each independent variable. Further, the R-squared statistic accounts for the strength of each regression model.

b) Logistic Regression

On the other hand, logistic regression modelling is used when the dependent variable is observed and dichotomous (e.g. 'Internet use', 'type of Internet connection: dial-up/broadband' etc). Statisticians argue that it is not a good idea to treat a dichotomous response variable like a continuous one and to use a multiple regression (the reasons go beyond the scope of this discussion). As with a multiple linear regression, a logistic regression involves modelling differences between individuals using multiple explanatory variables. The explanatory variables can be of any level of measurement and they are used in exactly the same way as in a multiple regression.⁶⁸

The coefficients yielded from the estimation of the logistic regression represent the relationship of the level of their associated independent variable with the likelihood of the 'higher' outcome of the dependent variable. For example, as 'Internet use' was coded with '2' denoting 'no use' and with 1 denoting 'use' a positive coefficient would imply that an increase in the independent variable is associated with an increase in the likelihood of "no use". Omnibus chi-square tests are used to assess whether all the independent variables are significant jointly (similar to the F test for multiple linear

⁶⁷ For more, see Agresti and Finlay, 1997: Chapters 11 and 14.

⁶⁸ For more, see *ibid*: Chapter 15.

regressions). Individual chi-square tests are used to assess the significance of each explanatory variable separately.

4.7 *Concluding remarks and limitations*

This chapter presents the overall research design and illustrates how the research questions are operationalised and explored empirically. The research strategy of the thesis relies on a three-step research design and is based on a combination of qualitative and quantitative methods. This strategy aims to not only explore the research questions and provide rich insights through complementarity but also to cross-validate all the data collected, making a contribution to methodological considerations in the field along with the anticipated theoretical and empirical contribution.

In the first phase of the research, the elite actors' interviews provide a first-level overview of the information society and digital divides in Greece. The survey conducted in the second phase addresses more specific issues, testing a series of hypotheses concerning the role of society's culture, policy and regulation in ordinary people's decisions to adopt the Internet or not. Lastly, the focus groups provide an in-depth explanatory reflection on the survey findings, cross-validating all three types of data.

This research design has a range of advantages, while being subject to certain limitations. On one hand, research often requires a combination of qualitative and quantitative methods as the whole research process involves the interaction of qualitative and quantitative approaches (Mayring, 1983). By using mixed methods, the researcher is able to use different data sources to validate and crosscheck findings. By securing the 'objective' quantification of the obtained data, on one hand, and the 'openness' of the qualitative data, on the other, new issues and concepts can be raised, and the study is led to new paths of analysis (Gaskell, 2000). Hence, the thesis attempted to bridge the gap between the prevalent ontological assumption that the social world is a mathematically ordered universe, and the consequent epistemological demand that research should be quantitative in order to be commensurable across theories, and the need for 'quality' in the process of pursuing knowledge (Kvale, 1996: 67).

On the other hand, I encountered the challenge of sequencing the above methodological tools and integrating their findings. This required a connection of the main areas of concern in accordance with how these areas were outlined in each research phase so as to allow consistent conclusions to be reached. This was achieved by examining the ways in which both elite actors and Internet users/non-users

understand, describe and perceive areas of importance, thus identifying possible divergences or commonalities in meanings, positions and contextual frameworks of expression. From this standpoint, the findings had to be insightfully combined, contrasted and compared so as to illustrate possible contradictions, strengths and weaknesses. The quantitative data mostly answered questions of 'what' and 'how', while the qualitative data addressed the question of 'why', either challenging or strengthening the 'quantitative' insights.

Lastly, there were practical difficulties in pursuing the research. One limitation was that the research subjects for the focus groups were selected by unavoidably ad hoc criteria and by using purposeful sampling. Another limitation relates to the validity and reliability of the qualitative parts of the research. Although these conventions are always one of the goals of qualitative research (ibid: 235-6), interviewing validity and reliability depend heavily on structural and individual restrictions. The thesis attempted to overcome these limitations by conducting tests of reliability and validity throughout.

5. Overview of digital divides in Greece: in-depth interviews with elite actors

5.1 *Chapter Overview*

This chapter presents the findings obtained in the first phase of the empirical research where 12 in-depth interviews were conducted with elite actors in Greece. The chapter presents the key traits of the Greek information society as portrayed by the elite actors. It takes a top-down perspective, examining the elite actors' views of policy, regulation and society's culture and their role in digital divides in the Greek information society. It thus answers the following questions operationalised in Chapter 4 (Table 4-1):

- a. 'What are the general characteristics of the Greek information society?' (1st principal research question).
- b. 'What are the cultural characteristics of Greek society of past and current times?'; 'More specifically, how do the cultural characteristics of Greek society take shape in the Greek information society?'; and, 'Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?' (all drawn from the 2nd principal research question).
- c. 'What is the general picture and key features of policy- and regulation-making in Greece?'; 'More specifically, how does policy- and regulation-making take shape in the Greek information society?'; and, 'What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?' (all drawn from the 3rd principal research question).
- d. 'What are the key parameters of the dynamic between society's culture and decision-making in digital divides in Greece?'; 'How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?' (all drawn from the 4th principal research question).

Section 5.2 presents an overview of the interview arguments, positioning them in two spheres of analysis, namely the socio-cultural and policy/regulatory spheres. From Section 5.3 to Section 5.8 the key interview findings are discussed in relation to six research themes. Section 5.9 reviews the findings in connection to the research questions and the next two phases of the research. The chapter concludes with an overall evaluation of the elite actors' interviews.

5.2 Overview of the interview discourses

The interviews oscillated between two spheres of discussion, namely the socio-cultural and the policy/regulatory sphere, and the interview arguments were grouped in one or both spheres. The analysis of the interview texts resulted in a list of 116 arguments (codes).⁶⁹ A careful look at the frequency of the arguments in each sphere of discussion allows the key issues raised by the interviewees to be identified. In total, 24 out of 116 arguments had a high frequency of appearance, with over 10 interview quotations attached to each (Table 5-1).⁷⁰

Table 5-1: Key arguments in the interview texts

Policy & Regulatory Sphere	Freq	Intervi- ewees	Socio-cultural Sphere	Freq	Intervi- ewees
Political liability	36	10	Lack of awareness in Greek society (social ignorance)	29	8
Distinctiveness of the Greek case*	29	9	Careful approach to the question/neutral answer	29	10
Careful approach to the question/neutral answer*	29	10	Distinctiveness of the Greek case	29	9
Policy and regulatory delays	17	7	Lack of infrastructure and/or satisfactory online services	16	5
Delays of the political and regulatory authorities in Greece	17	9	Lack of social action & institutional organisation	15	8
Greek information society, policy and regulatory environment	15	8	Need for awareness-raising	13	6
Significance of (EU) regulation and its full implementation	15	6	Non-technocratic culture (negativism & indifference) in Greek society	14	6
Policy, regulation and other initiatives	15	8	Negative role of the high cost of Internet services & networks in Greece	13	7
Need for more social policies	14	9	Cultural distinctiveness of Greek society explaining low Internet diffusion	13	5
Limited power of regulation	14	3	Low development of the information society (Internet) in Greece	11	9
Political language used in explaining the Greek information society	13	3	Importance of education	10	2
Need for more policy effort and change	12	7	*It appears in both spheres		
Lack of modernisation in the public administration	10	5			
Importance of socially accountable policies in the information society	10	4			
Policy initiatives in relation to the EU: recognition of nationality	10	6			

The above table (Table 5-1) illustrates that the interviewees paid attention to issues of socio-cultural and policy or regulatory interest in their attempt to account for Internet adoption in the Greek information society.

⁶⁹ The ATLAS/ti analysis output consisted of quotations, codes and memos providing graphical, qualitative and only partly quantitative sketching of the interview texts. All different interview arguments, including those with a high frequency presented in this section, were thematically categorised in six themes. See Appendix 5.

⁷⁰ These 24 arguments relate to more than one interviewee who said the same thing possibly more than once, but in different interview contexts. Therefore, they are indicative of the arguments dominating the texts. However, this approach results in discussing only a small number of arguments. In order to mitigate this disadvantage, the analysis of key thematic patterns in the next sections will bring up more arguments, divergent discourses and arguments that are exceptions.

In the policy and regulatory sphere, the dominant argument was that of political liability (36)⁷¹ for the persistently low Internet adoption rates as well as for the lack of completed and fully revised Internet regulation in the Greek information society. The liability of political forces arose from one question I posed at the general level of discussion, while being further supported by what the interviewees argued. Strongly associated with this argument were arguments concerning policy and regulatory delays (17), the lack of modernisation of the public administration (10) and the limited power of regulation (14) in Greece. These arguments and the discussion concerning the extent to which decision-making negatively influences the integration of the Internet into people's everyday lives drove the majority of the interviewees to hold a quite open discussion about the distinctiveness of the Greek case (29) and the existence of a particular policy and regulatory environment in the country (15). A significant number of interviewees suggested more social policies (14), additional policy effort and change (12), as well as more socially accountable policies (10) in the Greek information society. A few stressed the importance of implementing EU regulation promptly (15) in order for the above requirements to be met. Finally, a reflexive issue with a countable impact on the themes that emerged in the texts is that a large number of interviewees (10) kept a distance from the questions I posed, adopting a careful approach and providing relatively neutral answers (29). This remark invites the present research to critically interpret the interview arguments by examining possible contradictions as well as the factors that influenced the interview process.

As regards the socio-cultural sphere, the argument about the distinctiveness of the Greek case (29) was also prominent in this discussion domain. Questions about the role of society in the course of the Internet in the country brought up arguments concerning a lack of public awareness or social ignorance (29), as well as insufficient social action and a lack of institutional organisation (15). In response to questions about the reasons behind such societal traits, some interviewees maintained that these traits are becoming more intense due to the lack of sufficient infrastructure and/or satisfactory online services (16), and because of the high cost of Internet services and networks (13). Thus, six interviewees underlined the need to raise awareness (13), while two stressed the potential contribution of education (10). Finally, a large number of interviewees (10) were careful in how they answered questions of societal interest (29).

This general and quite out of context presentation of the key interview arguments illustrates that the interviewees approached issues of the distinctiveness of the Greek information society from a socio-cultural and policy or regulatory perspective, somewhat confirming the conceptual framework of the research. In addition, the interviewees stressed the importance of establishing a fully informed society through more socially accountable policy and regulation, and awareness-raising

⁷¹ The parentheses indicate the number of interview quotations for each argument.

initiatives. Parallel to this, they underlined the critical role of sufficient regulation by drawing on the critiques of officials, researchers and citizens concerning Greece's delays in implementing EU Internet regulation.

However, a more detailed analysis of the thematic components of the interviews is needed. What follows is a deductive thematic analysis of the interview texts – from the general to more specific – that details the coding framework constructed and its six themes⁷² as presented in Chapter 4 (pp. 107-8).

5.3 *The information society in Greece (1st theme)*

The interviews initially revolved around general characteristics of the information society in Greece, gradually shifting to issues concerning digital divides (see Appendix 5-1). Section 5.3.1 touches upon general traits and trends of the Greek information society, with the interviewees suggesting policy, regulatory and socio-cultural changes. In Section 5.3.2, the argument of 'Greek distinctiveness' is presented, especially in relation to socio-cultural specificities as well as the policy and regulatory practices in the Greek information society.

5.3.1 *The information society in Greece: general trends and driving forces*

The elite actors raised, from a societal and policy perspective, the role of culture in the Greek information society. A significant number referred to 'technophobia' in society and the public administration as the force driving the low adoption of new technologies in Greece.

Elite actors involved in decision-making argued that a techno-phobic culture is deeply embedded in society and only reflected in the country's political life. For instance, Vassileios Asimakopoulos, the Special Secretary of the Operational Programme Information Society (OPIS) is a key political figure and argued that:⁷³

VA: ...the difficulties...relate to the fact that we talk about technology in a society that is marked by techno-phobia...and this has influenced, in terms of delays, the efficiency of the Operational Programme Information Society, as even members of the public authorities in charge, such as ministries...do not put as much effort into it as they should, possibly because they do not understand the benefits of technology or because they are afraid of it.

Interviewer: ...it has to do with culture...

VA: (interrupts) Yes...this definitely reflects the dominant culture in society.

⁷² The six themes and arguments (codes) that each theme consists of are presented in Appendix 5. The discussion of the six themes in the main text does not cover the whole range of arguments, but aims to provide a contextualised and discursive picture of some key arguments per theme, highlighting the ways one argument connects to another.

⁷³ Each argument is linked to one or more interview quotations. The latter are presented in a selective way due to practical and analytical restrictions.

On the other hand, researchers and those who represent civic associations and socially-driven initiatives in the field criticised the country's authorities. They argued about a lack of modernisation and a non-technocratic culture in the public administration. An interesting reference was made by Professor Gregory Yovanof, from the Athens Information Technology Institute (AIT), to the techno-phobic culture of society as transferred to the public administration and shown in civil servants' negative attitudes to the introduction of new technologies in the workplace, the public sector:

...civil servants are afraid; they react to the introduction of new technologies in public services as they are afraid of being replaced by technology and losing their jobs because of computing. So, they think: 'it is better if I do not use it. (GY)

However, which forces did the elite actors regard as drivers of the 'techno-phobic' and 'non-technocratic' culture in Greece?

As regards the social domain, elite actors who are close to ordinary people acknowledged in one way or another that a 'techno-phobic' and 'non-technocratic' culture is dominant among ordinary people in the country. At the same time, not all emphasised the same forces as the drivers of 'techno-phobia' in society. Ignorance, a lack of awareness, a lack of familiarity, the high cost of Internet services, and the low quality of Internet services and infrastructure are some of the forces mentioned by the interviewees. These forces and the different emphases placed by the interviewees seemed to reflect their own experiences and roles in the information society.

More specifically, a significant number of interviewees pointed to forces related to low public awareness in the information society. Athena Bourka, the Auditor of the Hellenic Data Protection Authority (DPA), is a daily recipient of messages from ordinary people about privacy risks and argues that a lack of information and low level of awareness discourage people from adopting technologies such as the Internet:

...there is not much information on privacy issues on the Internet and we could certainly improve and provide more information to citizens on both generic and specific issues of public interest. (AB)

Practical issues concerning cost, infrastructure and Internet services were raised by those elite actors involved in different sectors of the information society. Academic researchers, such as Gregory Yovanof and Ioannis Tomkos at the AIT, representatives of Internet users, such as Nicos Vasilakos, President of the Association of Greek Internet Users (EEXI), and Nicos Frydas, President of the Greek Hotline, pointed to practical barriers to the diffusion of the Internet in Greece such as the high cost of services, lack of necessary infrastructure and lack of satisfactory services. Indicatively, Nicos Vasilakos, who represents the community of Internet users in Greece, argued that the high cost of high-speed Internet in Greece is obstructing Internet adoption:

The Internet is very expensive...can you find an ADSL connection at a cost of less than 50 euros per month? Where do we live, in Monaco? Enterprises cannot afford such an amount and ADSL is a technology that Europe is abandoning whereas Greece is only discovering now ... (NV)

Nicos Frydas, who runs the Greek Hotline and collects users' reports on Internet risks, noted similar practical issues. He pointed to the lack of IT economies of scale in Greece due to insufficient infrastructure and online services on the Internet:

Greek enterprises wanted but they probably did not know how to use new technologies for the creation of large-scale economies. On the other hand, there was no appropriate infrastructure or sufficient and wide-ranging online services from the public administration to enterprises. Greek enterprises also faced the problem of high cost, as telecommunication services are expensive... (NF)

Further, Professor Gregory Yovanof, Head of Broadband Wireless & Sensor Networks at the AIT, drew on his personal experience and stressed the lack of satisfactory online services in Greece. He confessed that, after he had moved back to Greece, he stopped using the Internet (Greek sites) for information searching and other non-work activities due to the low quality and limited number of services that Greek sites provide:

...when I was abroad, I used to use the Internet all the time to...find information about where to see a film, where to buy something; everything could be found on the Internet. Because in Greece...there are many services on the Internet but they are not broadly diffused, instead of wasting my time trying to find something on the Internet, I've decided not to go online for such purposes anymore. (GY)

Quite unsurprisingly, Sophia Parissi, Officer of the Federation of Hellenic Information Technology & Communications Enterprises (SEPE) and Product Manager of the second largest ISP in Greece, did not point to such issues of delayed market development, the high cost of Internet services and lack of satisfactory services and infrastructure. On the contrary, she argued that a lack of awareness and negative media messages about new technologies contribute to techno-phobia in society:

Negative advertisements of the Internet, on one hand, and insufficient information about the benefits of the medium and a lack of technological culture, on the other, contribute to the Greek citizen saying about the Internet: 'I do not accept it'. (SP)

As regards the policy and regulatory domain, politicians, regulators and researchers attempted to explain the phenomena of 'techno-phobia' and 'non-technocratic' culture in society by admitting the liability of the country's authorities. They argued about political liability in terms of practices and mindsets that dominate decision-making in the country. They placed an emphasis on regulatory delays, the existence of a non-technocratic and inefficient public administration, the lack of appropriate regulatory initiatives and the socially non-accountable character of the public administration. The way they approached some of these issues also reflects their own experiences and roles in the Greek information society.

Ioannis Tomkos, Associate Dean at the AIT and member of the Greek academic community, underlines the role of mindsets in the policy domain and the country's public administration, remarking that:

...we are talking about the diffusion of broadband services, the Internet, in Greece, but what we actually see when TV cameras go to ministers' offices is a picture of Jesus Christ because this 'sells'. We have not seen any picture of a laptop on ministers' desks to show that the minister uses new technologies himself (IT).

Vassileios Asimakopoulos, Special Secretary of the OPIS, critically reviewed the practices of the country's public authorities. As an insider, he provided a clear picture of the phenomena of non-collaboration, bureaucracy and lack of modernisation in the Greek public sector, pointing to the hindering role of such phenomena in development of the information society:

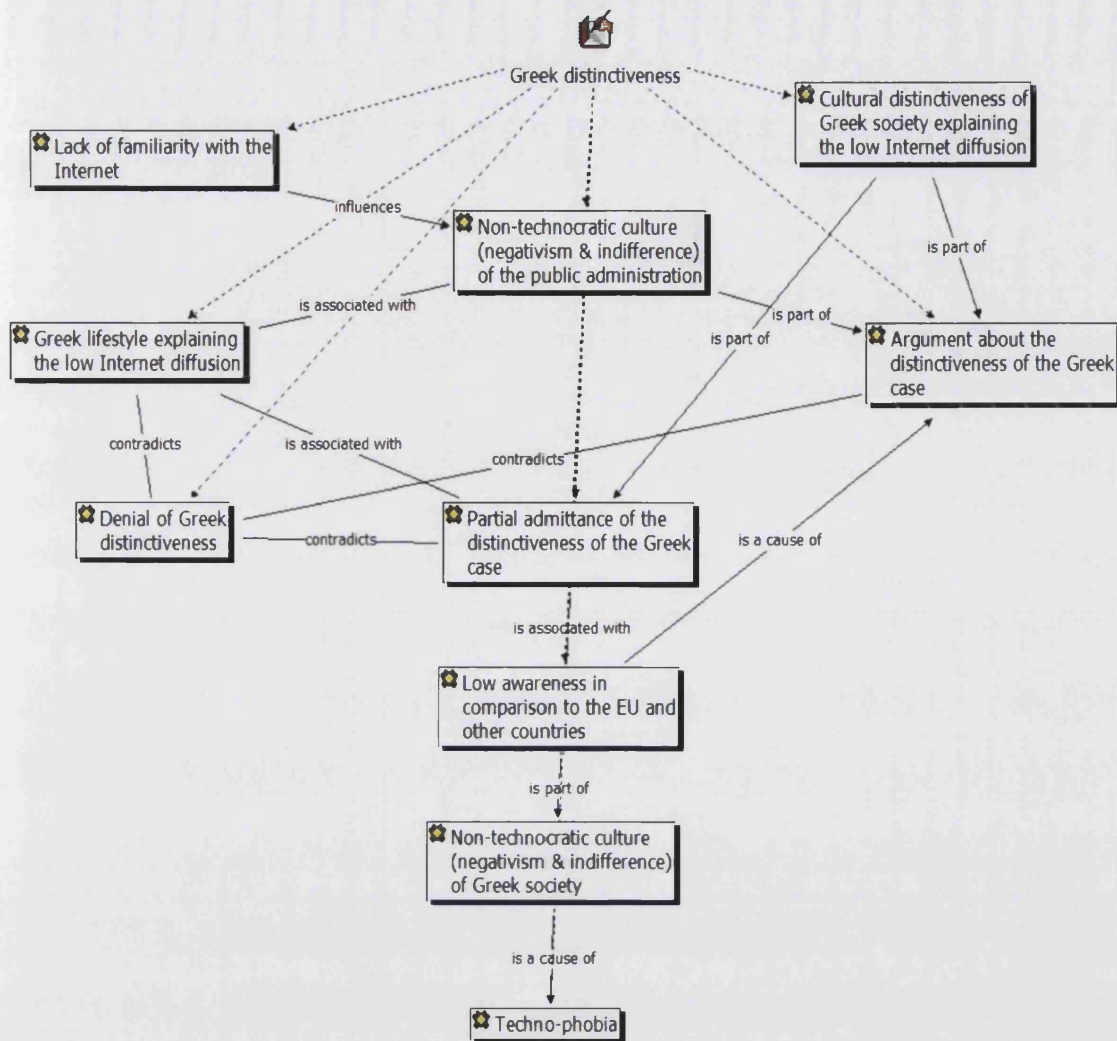
...a lack of previous experience in promoting new technologies contributes to the persistent difficulty in the harmonious co-operation of public authorities and in drawing a common policy line for the information society... Besides, time-consuming bureaucratic processes and a lack of modernisation of the public administration are important barriers to implementation of the Information Society Programme. (VA)

In summarising this section, one can argue that the elite actors perceived the non-technocratic and techno-phobic culture as the determining force of the Greek information society. They pointed to multiple manifestations of culture and domains where culture takes shape, while most indicated the liability of the country's political authorities. Also, actors not involved directly in policy and regulation in the information society highlighted the existence of structural barriers (e.g. market, cost, services, infrastructure) to technological development, something that expands the study's knowledge base as such barriers were not examined extensively as elements of the conceptual framework of the work.

5.3.2 *Digital divides in light of a Greek distinctiveness*

The above trends in the Greek information society raise the question of whether we can argue about a 'Greek distinctiveness', particularly in relation to Internet adoption. My intention in the interviews was to view Greece as part of a 'whole', as a case among others in the European region, and to explore the elements that make the Greek information society diverge from other countries in the region. As shown in the figure below (Figure 5-1) the interview texts framed and associated the theme of 'Greek distinctiveness' with arguments concerning the existence of a non-technocratic culture in Greece, Greek people's lack of familiarity with the Internet and the Greek lifestyle in general. At the same time, the interview discourses brought up contradictory arguments regarding the extent to which Greece differs from other countries (e.g. some interviewees dismissed the argument that Greece is a distinctive case).

Figure 5-1: Greek distinctiveness



More specifically, in attempting to address the under-development of the Greek information society I posed questions concerning the existence and role of Greek identity. Most interviewees recognised the existence of a cultural identity and argued that this identity drives Greece to maintain traditions that dissociate it from the increasingly powerful world of new technologies. The interviewees decoded cultural identity in a pessimistic way, referring to the existence of a non-technocratic and techno-phobic culture in society, policy and regulation, social ignorance, as well as to what they perceived, in general, as a Greek lifestyle. At the same time, alternative and somewhat contradictory views of distinctiveness shaped a complex and puzzling picture of Greek distinctiveness in the interviews.

George Papapavlou, Officer at the EC DG Information Society, is a Greek national familiar with the Greek context from having worked at the EC for implementation of the European telecommunications regulation. This gives his views about Greece and the distinction between Greek and European identity a particular weight. He argued that a particular culture exists in Greece, which he called 'Mediterranean', and linked this to the geographical location of the country, providing

examples of what this particular culture stands for. He supported the case of 'Greek identity' by referring directly to the adoption of new technologies and the contrasting adoption rates of different technologies in Greece (e.g. mobile telephony and the Internet).⁷⁴ Although he lives and works abroad, he used the first person plural (we) when referring to Greece, showing that he still attaches himself to the country:

...the difference is that we [Greece] are a Mediterranean country, we live more 'outside' than 'inside'...we are fans of short- and not long-term work... I think this is why we are better with mobile phones than with the Internet... On the other hand, if we understand what exactly the Internet, even mobiles, are about, if we realise that Internet services can do more things...because we are clever, adventurers, because...we look at the future, we have fantasia, because of all these, I believe we will use all the things that the Internet offers to a certain degree. **(GP)**

On the other hand, Costas Balictsis, Director of Telecommunications at the Greek National Regulatory Authority for Telecommunications (EETT), supported the existence of a particular Greek identity, referring to the broad notion of 'lifestyle' and calling for modernisation and more information for the public. Although he is a regulator who lives in Greece and works for the National Regulatory Authority, he referred to his fellow countrymen using the third person plural (they), somewhat distancing himself from the overall situation in Greece: 'people in Greece are still attached to a traditional lifestyle because they are not informed or because they have not seen examples of people in other countries using new technologies successfully.'
(CB)

I must note that, although both interviewees are decision-makers, they did not refer to Greek identity in relation to decision-making. On the contrary, they argued that Greek identity lies in society and its culture. Yet actors in non-policy domains went beyond this socio-centric discussion, arguing about a lack of 'citizenship' and a gap between citizens and decision-making mechanisms in Greece. For example, Nikos Frydas, President of SAFELINE (the Greek Hotline), discussed the role of 'citizenship' and awareness when he reflected on the disappointing results of the Greek Hotline. He explained these results by arguing that people do not avail themselves of publicly available tools of assistance as they lack awareness and a sense of participation:

...we do not have many more reports than in the first year and we are concerned about it. We have to raise social awareness about risks on the Internet...basically, we are egoists, we are not 'citizens' and modern Greek society has not had a long history of citizenship...just after the restoration of democracy in 1975. **(NF)**

The notion of citizenship and how it concerns both society and decision-making were illustrated vividly by Veronica Samara, Head of Research and Development of the SafeNetHome project in Greece. She argued that feelings of phobia and apathy are present in how Greek society dismisses calls for the responsible adoption of new technologies like the Internet:

⁷⁴ This example of differing adoption rates is also pointed to in Chapter 3, p. 64.

...although people in Greece are afraid of the Internet to some extent, they do not want to become more informed, while being generally negative regarding new messages... I am not really sure whether it is about apathy or a persistent negativism to anything that seems challenging, and requires effort or familiarisation... (VS)

Veronica Samara is in touch with both Internet authorities and ordinary people in the country in order to promote the goals of the Safer Internet Programme. Thus, she can evaluate the ways the country's authorities respond to the Programme's initiatives as well as to instances of phobia and apathy in society. In this respect, she charged the authorities with a 'lack of appropriate collaborative policy-making', arguing that more collaboration is needed to increase social knowledge and awareness:

...this culture of apathy is present, I think, in policy-making as well. Despite our efforts for closer co-operation with the authorities...I have to admit there is a lack of collaborative policy-making...we need more attention from policy-makers and regulators...we need them to hear our concerns and seriously consider our reports on the disadvantaged position of Greece with respect to children's secure Internet use and the lack of social knowledge and awareness... (VS)

As the interviewees represent different interests in the Greek information society, they often articulated contradictory arguments, indicating not only the multi-faceted character of the information society but also the intricacy of ideology and power relations in the field. For instance, although most interviewees highlighted the distinctiveness of the Greek case, they were sometimes uneasy accepting the particularity of Greece in comparison to other European countries. Vassileios Asimakopoulos, an official policy-maker in the field, referred to the specificities of the Mediterranean region to argue that lifestyle and social values in Greece do not differ in any way from other countries in the region. However, he failed to explain why Greece has lower Internet penetration rates than those countries:

The answer is that Greece does not differ in any way from other countries. For instance, in Spain there is also sunny weather and the sea; in Italy there are also traditional families, while Portugal also has very nice coffee shops. However, all these Mediterranean countries have made progress for instance in broadband Internet. (VA)

Also, some elite actors did not reject the Greek distinctiveness but attempted to give a positive tone to their words, maintaining that the Greek information society will catch up in the future. At the same time, they failed to address issues of cultural change which they raised elsewhere in the discussion. For instance, Costas Balictsis, Director of Telecommunications at the NRA, made the point about change, referring to political and regulatory interventions only, whilst he was not concerned with the ways such change will impact on society and culture:

Even worse is the 1% of broadband penetration [in Greece]. Is it possible? This means that the demand is not satisfied or that the products we offer are not what they should be. At the same time, there is some positive increase; so there is space for action and we need further interventions. (CB)

These two sub-themes, general trends in the Greek information society and Greek distinctiveness, illustrate to some extent the diversity of views that the elite actors articulated in the interviews. These sub-themes point to the core place that

culture and its various aspects hold in the Greek information society. Also, issues such as the dialogue of the socio-cultural with the policy and regulatory spheres of action, the potential of future change and the role society and politics play accordingly, were all brought up in the interviews.

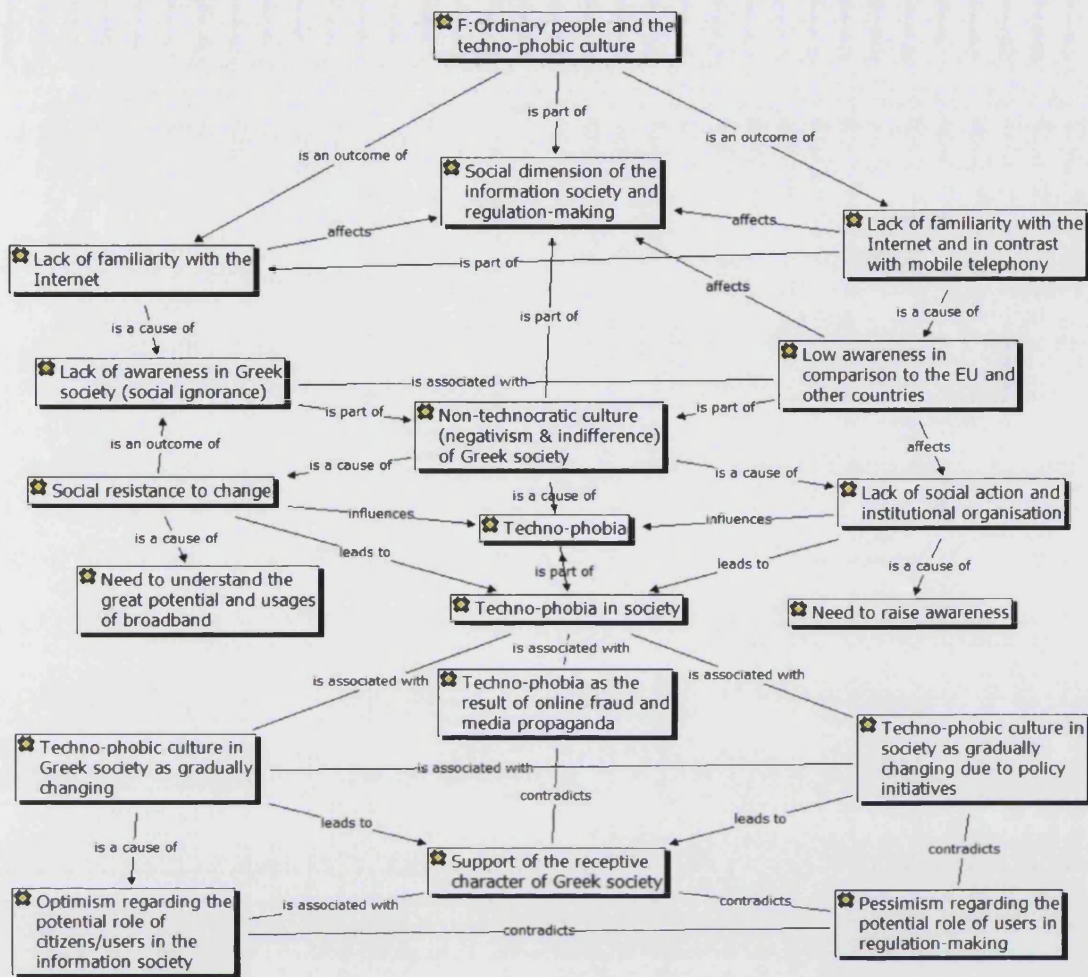
5.4 *Cultural drivers in the Greek information society (2nd theme)*

After pointing to the general traits of the Greek information society, more specific issues were raised when following up the above general remarks. Emphasis was placed on how ordinary people in Greece participate in the information society and the links to policy and regulatory practices (see Appendix 5-2).

5.4.1 *Ordinary people and the ‘techno-phobic’ culture*

As shown in Figure 5-2, the interviewees admitted the existence of low Internet adoption rates in Greece, pointing to society’s culture as the driving force. They paid attention to what they called ‘techno-phobia’ and resistance to new technologies in Greek society, while they attempted to justify these arguments by drawing on their experiences as key actors in the field. A significant number attempted to identify from where ordinary people’s techno-phobia stems and argued about the close links between society’s culture and political culture in Greece. Nonetheless, some were quite optimistic as they argued that techno-phobia in society is on the way to changing.

Figure 5-2: Ordinary people and the techno-phobic culture



The majority of interviewees argued that a non-technocratic and techno-phobic culture exists in Greek society, driving most people not to integrate the Internet into their everyday lives. For instance, Vasileios Asimakopoulos, the person in charge of major policy decisions for the information society, claimed that beyond the liability of political authorities techno-phobia in society plays an important role in how the information society is developing in the country:

...beyond the horizontal character of the Programme [OPIS] and the lack of modernisation of the public administration, difficulties also relate to the fact that we talk about technology in a society that is marked by techno-phobia. In other words, if the same Programme was about roads and not technology then it would be easier because it would be more comprehensible to the people. (VA)

Precisely how does techno-phobia influence Internet adoption in the country? Low awareness, social resistance, a lack of social action and institutional organisation in everyday life activities, as well as a lack of familiarity with new technologies were some of the issues the interviewees pointed to as reflections and supporting factors of the techno-phobic culture of society. Whereas interviewees with different roles in the information society pointed out different issues, the interview discourses drew more or less the same picture of Greek society: a society that declines to integrate the Internet

into everyday routines and resists technological artefacts such as the Internet. For instance, Sophia Parissi expressed market concerns and argued that a lack of knowledge results in public fear about the Internet's effects on user safety:

...from a commercial point of view, Greek citizens do not know how to protect themselves and their children even from simple and broadly known Internet risks, such as viruses. They do not have thorough knowledge and this might create fears about using the Internet, [thus] being a source of discouragement. **(SP)**

George Papapavlou, an EC official, maintained that ordinary people in Greece are hugely inactive and this leads to societal obscurantism and the further growth of people's negative attitudes to the Internet. He compared Greece with other European countries to justify this point and to show that a European perspective allows the identification of instances where techno-phobia in Greece results in a lack of social action and institutional organisation and this, in turn, to more phobia and negativism regarding new technologies:

In other, and mainly in Anglo-Saxon and Scandinavian countries, there are civil societies which are organised in a way that active civil groups exist, take measures, communicate with public authorities, protect citizens' and consumers' rights etc, etc... In Greece, atomism dominates society and therefore collective social action is far less existent than in other European countries. **(GP)**

The two excerpts above show that market and policy actors acknowledge the role that social perceptions, social knowledge and integration of technologies into people's lives play in development of the information society. These views are in tune with what researchers, such as Dr. Veronica Samara from the Safer Internet Programme, claimed. Aiming to reflect on societal needs and increase people's awareness and online safety, Veronica Samara argued that a complex culture of resistance and phobia drives people in Greek society to be unwilling to receive new information and knowledge.

Inadequate social awareness is also noted by actors who hold official data on the protection of Internet users from privacy risks on the Internet. Athena Bourka, Auditor of the Hellenic Data Protection Authority (DPA), reports that in comparison to DPAs in other European countries Greece has a particularly low number of reports on online privacy and security problems, especially with regard to spamming. As she points out, this is not because there are less security problems in Greece, but because Greek users lack awareness of and interest in reporting such problems:

...compared to other European countries, we have a lower number of reports on spamming. This does not mean that we have less spam. It rather means what I told you before...low awareness... initially, some of those reports had not been addressed to us, the EETT transferred some of them to us, as citizens are not informed about where to address their complaints. **(AB)**

Nevertheless, a couple of interviewees attempted, in a relatively fragmentary and not empirically grounded way, to articulate a more positive view, arguing that 'techno-phobia' in Greece is on the way to changing. For instance, Vasilieios Asimakopoulos expressed a positive view about the changes that the techno-phobic

culture of Greek society is now undergoing. He also supported, albeit in a quite biased and simplistic way, the contribution that his and the government's policy have made in this direction:

This culture [techno-phobia] is reflected in Greek society, although the latter is changing. We can see that it is changing and we believe that our work contributes to that. At the level of citizens, we believe that if citizens are told about the information society in simple words, without technocratic terms and in a language that fits their standards, thus becoming recipients of our work, we can come closer to them. (VA)

However, the way in which decision-makers evaluate and assess societal traits and phenomena is often socially distant. Costas Balictsis, Director of Telecommunications at the NRA, was inclined to refer to citizens as consumers⁷⁵, while arguing that these two concepts are two sides of the same coin. This is important for the discussion at this point as it indicates the way society and its traits are often treated by policy-makers and regulators in the field:

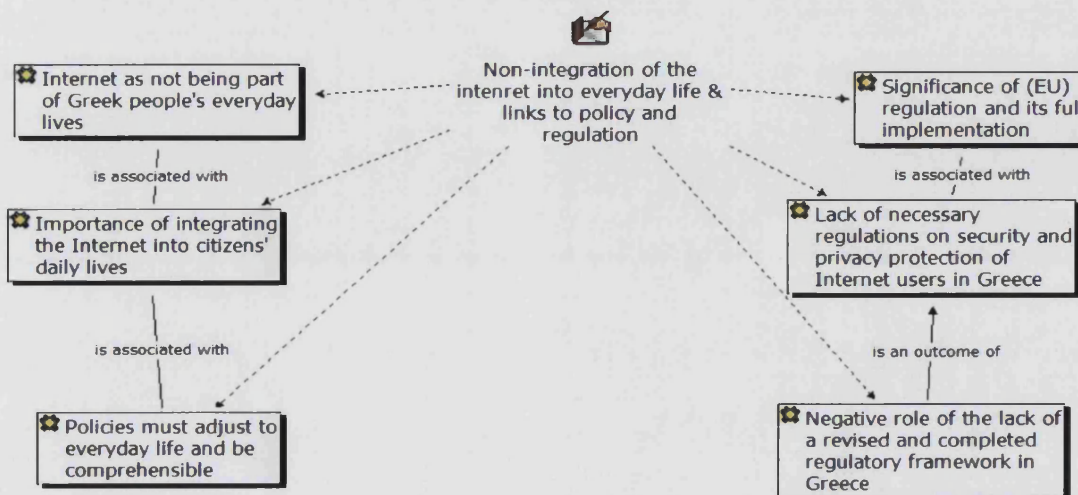
Interviewer: However, you are talking about consumers and not citizens...

CB: Both terms...probably they indicate different notions and definitions, but 'consumer' is a broader term as 'citizen' refers to a person who lives in this country, while 'consumer' can also be a foreigner who visits the country. Hence, these two terms present two aspects of the same thing...they are supplementary terms.

5.4.2 *Techno-phobia, non-integration of the Internet into everyday life and links to policy and regulation*

Arguments concerning the techno-phobic and resistance culture of ordinary people in Greece go beyond the societal domain, involving decision-making strategies and practices as well. The figure below (Figure 5-3) illustrates the links between society's culture and decision-making in the Greek information society as outlined in the interviews:

Figure 5-3: Non-integration of the Internet into everyday life & links to policy and regulation



⁷⁵ For more on this debate in the literature, see Chapter 1 (p. 22) and Chapter 2 (p. 53).

The links between society's culture and decision-making and, more specifically, the significance of policy and regulation for integrating the Internet into ordinary people's everyday lives were raised by many elite actors. First, decision-makers such as Costas Balictsis, the Director of Telecommunications at the NRA, recognised the role of the low level of integration of the Internet into people's lives in the country's digital divides:

The story of the Internet in Greece is pretty surprising as Internet penetration is not as high as it should be. This can be explained if we take into account broadband and the social conditions in our country... It might be that Greek people have not integrated the Internet into their daily lives and activities. Definitely, cost plays a role but I think it is the utility of the Internet that affects the Greek citizen more. **(CB)**

On the grounds of the 'utility' and 'integration' factors, Costas Balictsis argued that change must begin from the country's public administration and authorities. He proposed e-government services and modernisation of the public administration. He also stressed the need for policy to respond to people's expectations and needs, criticising the country's public authorities in those terms:

What would be very stimulating for the Internet – I believe this at the personal level as well – is e-government so that citizens become more familiar with online services and realise their utility. I'm afraid that the public sector is still very behind. We are talking about infrastructure and wires, but citizens need new and useful online public administration services for their everyday lives. **(CB)**

Likewise, other actors involved in decision-making at the EU and national levels, such as George Papapavlou and Vassileios Asimakopoulos respectively, claimed that the integration of technology into people's lives can be achieved through more socially flexible and appropriate policies and regulations:

...where technical barriers are not simple for the citizen, there is some ground for further policy efforts to be made so that Greek society becomes substantially informed. **(GP)**

.....

The main [policy] mistake was that local particularities were not taken into account. What we attempt to do now is to take them into consideration as we intend our policies to be more comprehensible at the level of everyday life and better understood by citizens not only in terms of language but also in terms of action. **(VA)**

Even actors involved in market- and socially-driven activities, such as Nicos Frydas, provided arguments with a strong mix of societal and political rhetoric. Nicos Frydas, President of the Greek Hotline and a businessman working for the establishment of co-regulation in the Greek information society, placed everyday and cultural parameters at the core of this rhetoric:

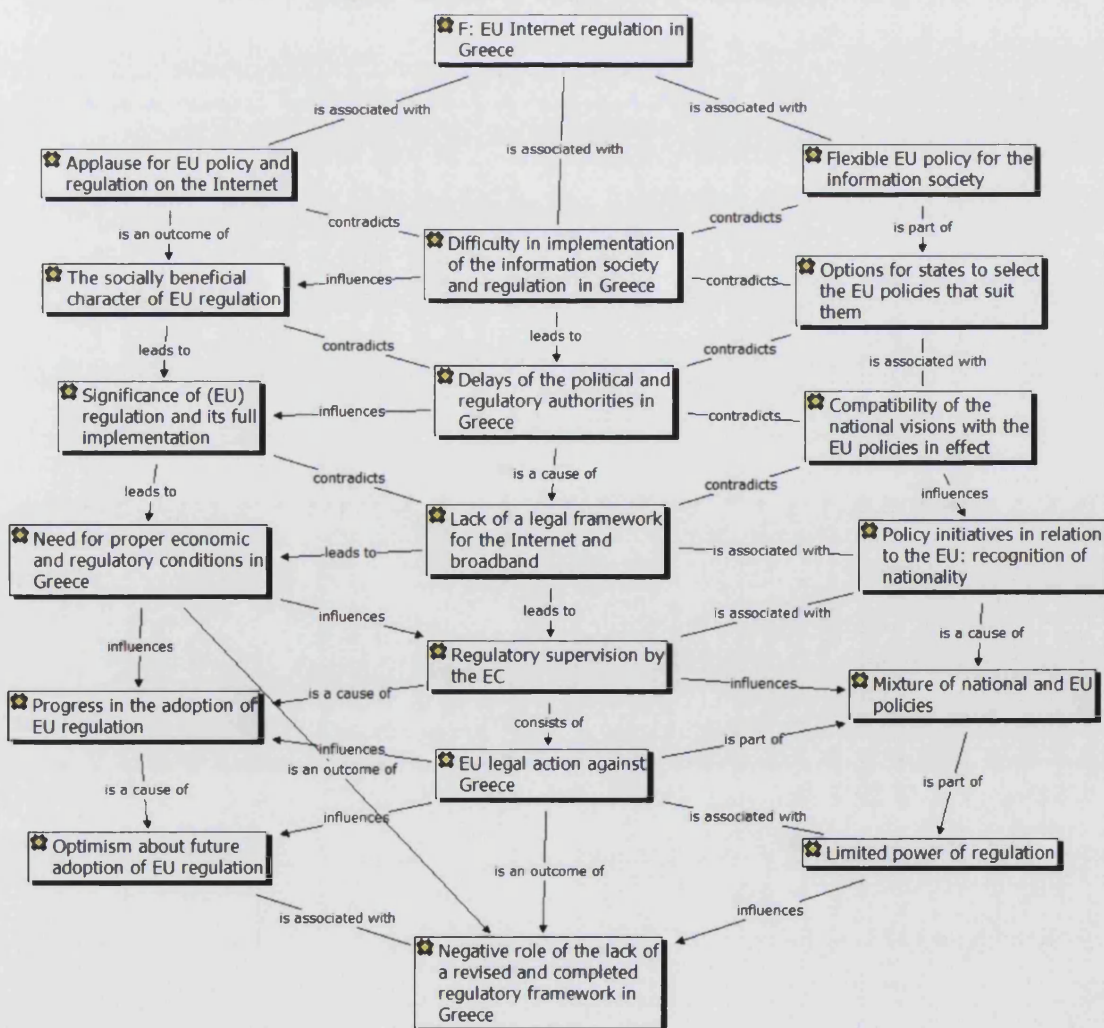
...if Greek people were certain about the benefits the Internet can bring to their lives, possibly they would obtain Internet connection. There is no sufficient infrastructure or significant offer of e-government services as the people in the public sector are negative regarding the development of online public administration, while the high degree of social ignorance does not let citizens develop a rational perception and usage of the Internet. **(NF)**

Hence, policy and regulation were considered in the interviews to be key forces in the Greek information society and their role is discussed in greater depth in the two themes that follow. These two themes also shed more light on the linkages of policy and regulation with society and on the dynamics of culture in both domains.

5.5 EU regulation drivers in the Greek information society (3rd theme)

The theme of EU regulation was introduced by the interviewer to follow-up the regulators' remarks about the role the delay in implementation of EU Internet (telecoms) regulation has played in the Greek information society (see Appendix 5-3). As shown in the figure below (Figure 5-4), the interviewees referred to the traits and importance of EU regulation, the difficulties Greece has faced in implementing EU regulation and the consequences of these. Nevertheless, some arguments suggested Greece is currently making progress in implementing EU regulations.

Figure 5-4: EU regulation in Greece



5.5.1 *EU regulation and its significance*

The interviewees supported the EU regulatory framework of 2003. Those working on Internet policy and regulation argued that EU regulation constitutes a sufficient tool for the management of regulatory challenges in cyberspace. Vassileios Asimakopoulos, Special Secretary of the OPIS, confirmed the Greek government's will to implement the EC telecoms regulation. However, he did not explain the delays in the implementation process and shifted the discussion to general EU policies and action plans:

We are happy that Europe understands new technologies in such a way. Particularly the new plan of the Commission, i2010, that replaces the e-Europe programme, satisfies us, showing that the direction of European policy is absolutely compatible with the way we perceive the information society. **(VA)**

Costas Balictsis, Telecommunications Director at the NRA, blamed the Greek Ministry of Transport and Communications for the delays in the implementation process. Also, he noted the negative effects of non-implementation of EU regulation on the overall regulation-making process in the country, stressing the urgency of the matter:

We [EETT] are not directly involved. The ministry is responsible for transposing the EU law. However, we are affected by this delay because we cannot take action that conflicts with the new EU regulatory framework. Also, we cannot act without having a revised regulatory basis that will guarantee the legitimacy of our proposals. **(CB)**

However, regulators in the country seem to limit the importance of regulation to the smooth operation of the market and to consumers' interests. Costas Balictsis avoids the social mission of regulation and the ways regulation may respond to societal needs and concerns:

...market competition and the need for regulatory supervision determine regulation itself. Besides, this concerns consumers as well as market competition and its regulation have remarkable effects on consumers' rights. **(CB)**

When the interviewees were asked about the potential of regulation to remedy the low Internet adoption in Greece, some like Manoussos Voloudakis, President of the National Committee for Electronic Commerce, acknowledged the limited power of regulation due to the global nature of the Internet and the fact that regulation runs behind technological advancement:

But I do not know whether Internet regulation could ever be a completed, absolutely secure and respected area of rules...the nature of the Internet does not really allow that...' **(MV)**

The limited power of Internet regulation was also highlighted by activists who aim to increase social awareness, such as Dr. Veronica Samara from the SafeNetHome project in Greece. In these terms, Dr. Samara emphasised the important role self-regulation can play in making up for the failures and insufficiencies of formal regulation:

...what strikes us is not regulation itself...rather whether users can develop self-regulation and apply efficiently the various – although again not completely sufficient – self-regulatory measures they have available. **(VS)**

Self-regulation, its role and status in Greece are discussed later as part of the other propositions of the elite actors to shrink digital divides.

5.5.2 *EU regulation: non-implementation and effects*

The elite actors' enthusiasm about EU telecoms regulation is in contrast to the fact that Greece has been the EU member state with the longest delay in implementing this regulation. This delay was confirmed by George Papapavlou, who oversees the implementation of EU regulation in member states, including Greece: '...Greece has not implemented the new EU regulatory framework yet, although this framework should have been implemented by July 2003'. **(GP)**

Almost all the interviewees expressed concerns about the very delayed implementation of EU regulation in Greece and noted the importance of a revised regulatory framework to increase Internet adoption and development of the market in Greece. In this spirit, actors in the market and regulators underlined the negative impact of the non-implementation of EU telecoms regulation in Greece, particularly with respect to development of the broadband market:

...Greece has not implemented the new EU regulatory framework yet...this has made things difficult, especially in terms of providing competitive services...eeee...of broadband networks that allow access to the Internet. **(GP)**

.....

I think that the Greek citizen is a step behind, as s/he has yet not trusted the medium. The lack of regulation and delayed transposition of EU laws on the Internet contribute, however, to the persistence of the current situation of non-usage. **(SP)**

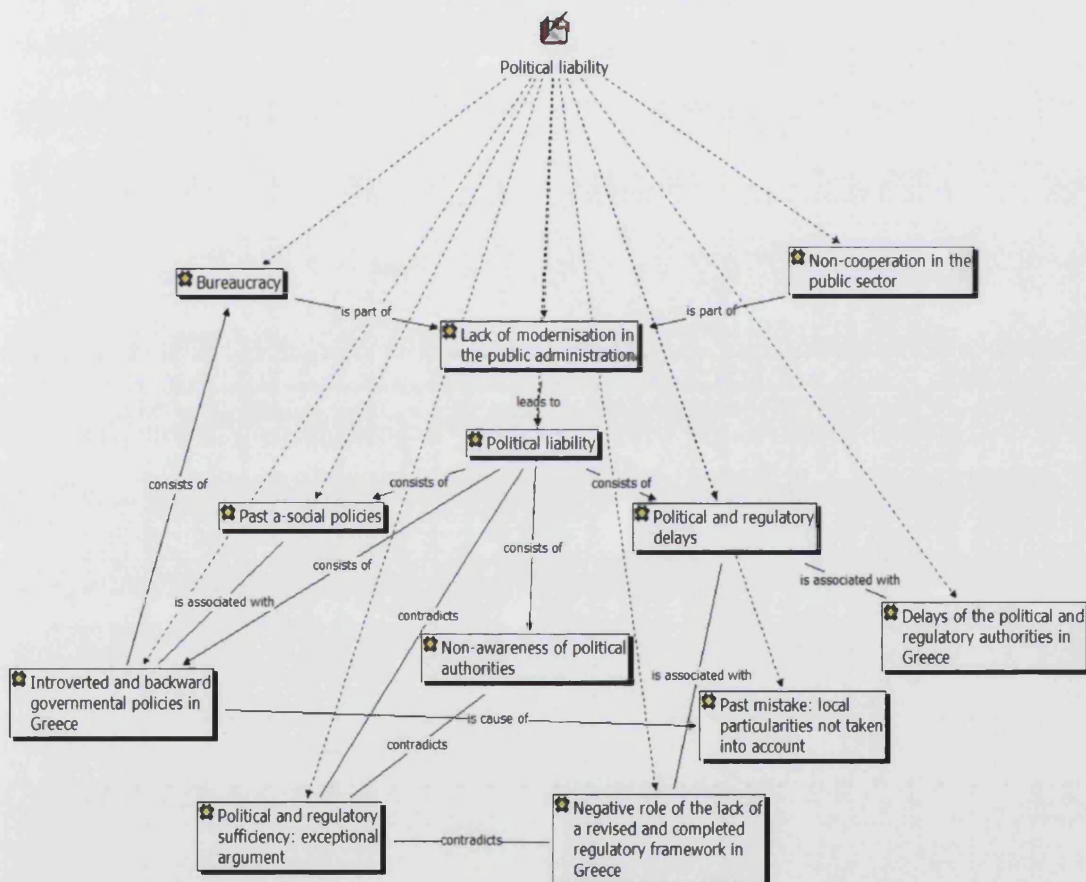
On the other hand, interviewees representing the body of Internet users in Greece went beyond the market-related effects that regulators and market operators emphasised. They maintained that the existing regulatory gap between Greece and the EU has implications for the extent to which people in Greece can change their preconceptions and become more willing to integrate new technologies into their daily lives. Elena Spyropoulou, the Legal Consultant of the Association of Greek Internet Users (EEXI), argued that regulatory delays and fragmentation play a fundamentally negative role in the protection of users' privacy and security online, thus obstructing the change of society's culture in the country:

...about Internet content, there is not a single regulatory body that sets specific provisions on the quality and types of the freely accessible and legal online content. ISPs are the only ones who can ensure access to legal and quality online content. **(ES)**

5.5.3 Non-implementation of EU regulation and political liability

As part of the broader discussion of policy and regulation in the Greek information society (see Appendix 5-4) and as the figure (Figure 5-5) below shows, even the interviewees involved in policy and regulation considered bureaucracy, non-modernisation of the public sector, policy delays and a lack of awareness in the public sector as the main reasons for Greece's failure to implement in full and timely the EU telecoms regulation. These causes of failure seem closely associated with legacies and traditions in the country's public administration. On the other hand, arguments in favour of current decision-making practices in the Greek information society constituted exceptions in the interview discourses:

Figure 5-5; Political liability



Researchers such as Professor Gregory Yovanof and Ioannis Tomkos raised the issue of the priorities set by the country's authorities, while representatives of EU regulatory authorities such as George Papapavlou noted the issue of low awareness not only in Greek society but also in national authorities:

GY: It is a matter of priorities...

IT: (interrupts) ...definitely, definitely...

GY: ...politicians do not see it as...that would prioritise the diffusion of broadband services and infrastructures as being critical for competition and all possible areas of development.

.....

We do not have regulatory bodies and members of parliament who are informed and have good knowledge of these issues, so they do not inform the citizen properly. (GP)

Even if policy actors admitted political liability, members of the Greek government at the time of the interviews such as Vassileios Asimakopoulos used strong political language. Vassileios Asimakopoulos argued that the political authorities in Greece have now progressed compared to the previous government of the Socialist Party:

Interviewer: However, Greece still presents weaknesses in its efforts to transpose and implement EU policies and regulations on telecommunications.

VA: That is right, but the Ministry of Transportations and Communications has proceeded to the formulation of a telecommunications regulation that transposes the new EU framework. The new government corrected the mistakes and omissions of the previous government within just eight months of being elected.

On the other hand, social actors who proposed the alternative of self-regulation problematise the distinction between social and policy action particularly when it is about users' protection on the Internet. These actors emphasised the absence of self-regulation in Greece more than official regulation, arguing, furthermore, about the lack of social and organisational action. The words of Dr. Veronica Samara from the SafeNetHome project are indicative, when she argued that the absence of social and organisational action, people's cultural predispositions, as well as inadequate decision-making all discourage self-regulation in the country:

Interviewer: Do you think that the lack of awareness impacts on self-regulation in Greece?

VS: Yes, no doubt about that...even the savviest citizens are not aware of existing self-regulatory mechanisms, while there is no organisational action in supporting and disseminating self-regulation. A lot has to change in society's cultural predispositions as well as in how politicians make self-regulatory mechanisms known... As a SaferInternet project...we try to play that role...it is not easy...we face a lot of ideological and political barriers...

Nicos Frydas supported another, more moderate direction of regulation. He is the President of SAFENET, an association of industry and other stakeholders, as well as the President of the Greek Hotline, promoting co-regulation among social, industry and regulation players in Greece. Thus, he referred to the conflict of interests between the bodies involved and to the inefficiency of governmental action in Greece as the reasons why co-regulation should be in place:

The argument that self-regulation is enough is idealistic. Co-regulation is the best for the interests of the public and the industry. In our country, self-regulation does not work as it should and this is the reason I believe in co-regulation. For instance, in the UK the system of blocking child pornography works as a result of a purely governmental initiative. I do not know if such initiatives could work equally well in our country. **(NF)**

These issues again demonstrate the strong dialogue between society, policy and regulation within a complex system of actors and factors, suggesting that this dialogue is taken into consideration when researching digital divides. However, it seems that the elite actors mostly argued on the grounds of their expertise and professional interests, whilst the market appears to sit in between society and politics, being presented as a mediator affected by politics and society.

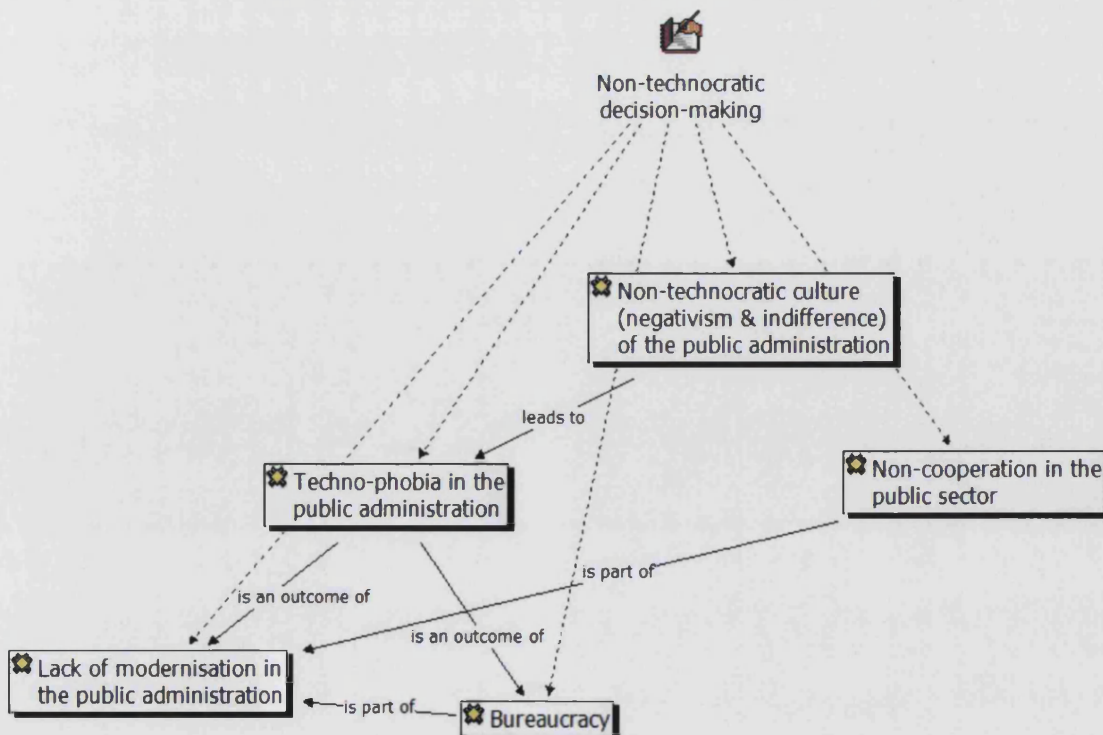
5.6 Policy and regulation drivers in the Greek information society (4th theme)

This theme (see Appendix 5-4) examined Internet policy and regulation in detail and beyond EU regulation. The elite actors made arguments concerning the out-of-date and a-social policy and regulatory schemes on the Internet in Greece. They also noted underlying cultural forces that reside in decision-making in the Greek information society and account for the low Internet adoption rates in the country.

5.6.1 Non-technocratic decision-making: implications for the information society

When questions were posed about the reasons underlying Greece's failure to implement EU regulation and stimulate Internet technologies, the interviewees noted the critical role Greek authorities and the public administration have played. As the figure (Figure 5-6) below illustrates, the interviewees argued that a culture of poor cooperation, bureaucracy, a lack of modernisation and techno-phobia dominates the Greek public sector and the country's overall decision-making practices. At the same time, they attempted to disentangle the ways these traits of decision-making are associated with one another:

Figure 5-6: Non-technocratic decision-making



The interviewees mostly resorted to bibliographic and research sources to support the argument that low Internet adoption in Greece and Greece's long-standing regulatory gap vis-à-vis the EU are closely related to bureaucratic, inefficient, non-technocratic and socially non-accountable decision-making practices in the country. Actors involved in ICT research, such as Gregory Yovanof and Ioannis Tomkos, gave examples of how the bureaucratic operation of the public administration accounts for policy and regulatory delays or failures in the Greek information society:

These [regulatory delays] are very indicative of the dominant bureaucratic mechanisms in our country...bureaucracy is much stronger in Greece than in other countries...one reason is the absence of electronic means and services in the public sector ...in order for draft legislation to be signed ten signatures are required. It could be electronic signatures so that it takes just one day. However, just the signing off of legislative drafts takes two months in Greece. **(IT)**

...why are we talking about broadband...since politicians do not recognise the benefit of e-services, how can we contribute to their diffusion? **(GY)**

Reflecting on the authorities' self-evaluation of structure and operation, the interviews provided references to a lack of collaboration, absence of formal and systematic campaigns for public awareness-raising, and to the limited and socially distant scope of the authorities' activities and services. The words of Athena Bourka, Auditor of the Greek DPA, are indicative when she indirectly points to the directions in which the authorities should work more intensively:

AB: ...the truth is that have only a few auditors. Another problem is that, technically and beyond the law, we do not have the necessary means to conduct extensive audits, to explore the operational systems in-depth and to use advanced technical tools.

Interviewer: However, do you participate in joint actions with other bodies of action?

AB: I would not say that we collaborate in such a way. We collaborate in some cases only. Eeem...but there is no regular co-operation line to follow. For example, we were asked to legislate in order to transpose the EU Privacy Directive and there was no collaboration with any other authority.

Interviewer: ...and what about increasing public awareness of privacy protection on the Internet?

AB:if we are talking about information provided to people...eeem...there is no particular awareness campaign that we run, something that we should promote further. Eeem...as people are interested in this as well. For example, last year...in our annual report these issues were mentioned, and when the DPA President announced the report the public was pretty interested...

On the other hand, market-players such as Sophia Parissi emphasised the lack of modernisation and traditionalism of the Greek public administration. Of particular interest is Sophia Parissi's argument that people's unwillingness to use new technologies, such as the Internet, is a phenomenon present not only in society but also in the public administration:

...unlike what happens in other European countries where policies are vertical, straightforward, clear and mandatory...in Greece there is no such functionality...this is due to the 'old-fashion' identity of the Greek public sector which is not modernised enough, and because of the reluctance of leaders to promote the Internet as a tool for the necessary modernisation of the public administration. **(SP)**

Thus, even interviewees not directly linked to decision-making argued about particularities concerning attitudes, traits and cultures in the public sector in their

attempt to explain the drawbacks of the information society in Greece. In this sense, the interviewees highlighted a research area that has been overlooked in the national research of digital divides, whilst they approached cultural traits and trends as matters that go beyond society and ordinary people's everyday living.

Conversely, although the elite actors identified cultural trends in the public administration along with society's culture, it is puzzling that they pointed to the existence of a gap between society and formal policy and regulation in Greece. They argued about such a gap and supported the need for more socially accountable policies and regulations. Nicos Vasilakos, the President of the Association of Internet Users, pointed to the indifference and ignorance of decision-makers about technology-related matters, thus calling for more socially accountable policies:

For me the problem is that all politicians have...a laptop, a gift from the Parliament, and they have given it to their secretary to work with. This is a problem because we talk about the Internet like it does not concern us. The main political authorities seem to be far away from the Internet. The ministries have impressive websites constructed by companies, but we want to see that jobs and attention are given to people, to the citizen. The previous government was saying 'lets talk about the Internet', but this government avoids that, saying 'I need more information, give me some time'. (NV)

Nevertheless, only a few actors emphasised the cultural characteristics of Greek society more than the practices and cultures of decision-making in the Greek information society. These were actors involved in policy and regulation who attempted to defend their own work and efforts in this domain, shifting the focus to society. One indicative example is Manos Voloudakis' words on behalf of the National Committee for Electronic Commerce:

Interviewer: You mentioned the non-technocratic and monolithic culture in civil society. Do you think this is similar to the culture of the public administration and policy-making?

MV: No, no, no...I'm sure that there is no such non-technocratic culture in policy-making. This government is making a lot of effort to disseminate new technologies and keep up with other EU countries' technological development. As a government, we inform people and launch action lines in agreement with citizens' needs and the EU guidelines...the bad thing is that we do not find the enthusiastic acceptance from citizens that we expected...this is why no significant progress has been achieved yet.

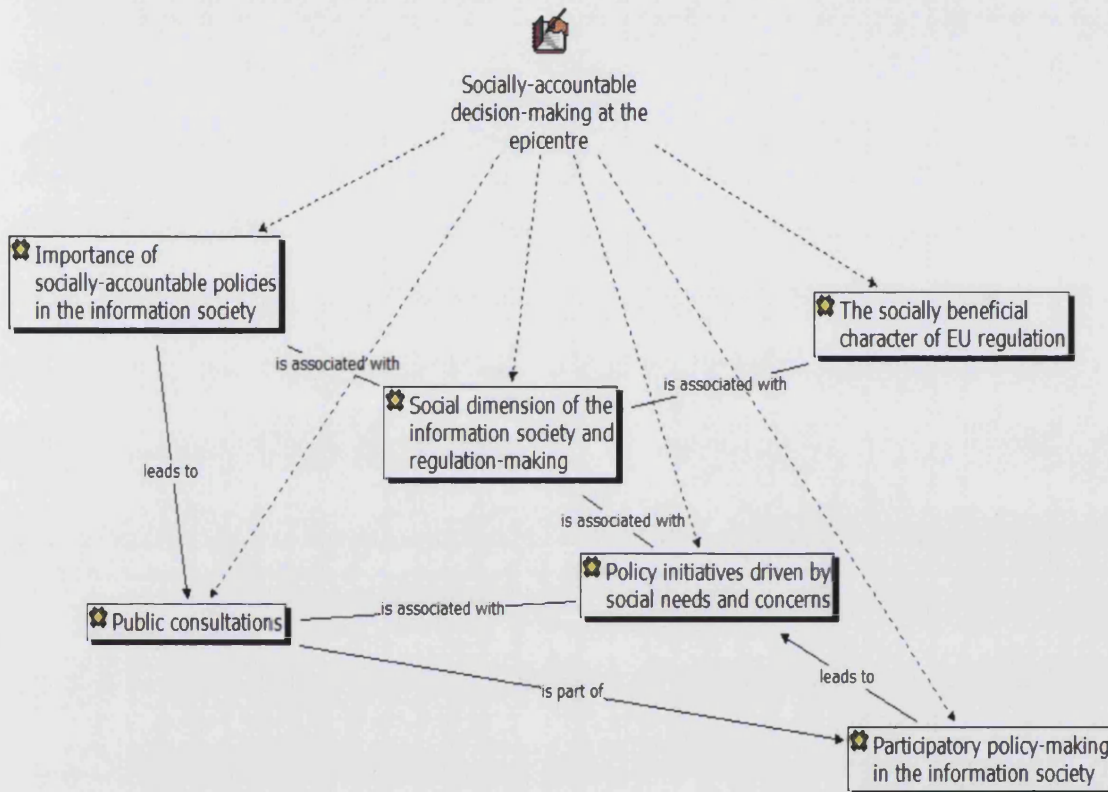
Beyond the traits of decision-making, elite actors such as Ioannis Tomkos proposed that initiatives be undertaken for awareness-raising in the public sector. Ioannis Tomkos is involved in ICT research and proposed that awareness-raising campaigns and seminars be organised so as to increase awareness of necessary policies and regulations in the field among the country's public authorities:

Before this discussion, we [he and Gregory] talked about the organisation of a workshop which would aim to increase the awareness at the citizen level, but first at the level of leaders, at the level of ministers...is that right? Rulers want to implement policy priorities that are acquired from the EU and are not rulers' own priorities...they [rulers] may not understand the reasons that make such priorities a must. (IT)

5.6.2 Socially-accountable decision-making at the epicentre

In connection with the above remarks, the interviewees argued that decision-making in the country must be more socially directed, suggesting socially accountable policies and regulations for the Internet. Their suggestion provides space for the participation of people in the information society to be enabled and for digital divides to be addressed (Figure 5-7):

Figure 5-7: Socially-accountable decision-making



As discussed later, the elite actors argued that ordinary people cannot play an important role in decision-making and they suggested that change should begin with the authorities. An indicative example is Ioannis Tomkos, Associate Dean of the AIT, who pointed to the role political change should play in society's change in the information society and the role of e-government in particular:

...[with] the development of e-government, society will also be dragged into using broadband services. Therefore, the government has a double role to play... I feel very sorry when I go to public services and see desks without computers and secretaries moving files between desks... If the change does not start with public services... **(IT)**

While political change was considered to be the driver to change the traditional and non-technocratic character of Greek society, society's needs were proposed as lying at the core of decision-making. Although this sounds contradictory, it highlights the complexity of interactions between society and politics in the Greek context. Also, the interviewees emphasised the importance of socially-accountable decision-making by reflecting on their own expertise and roles in the information society. For instance,

Nicos Vassilakos, President of EEXI, pointed to areas policy-making in Greece should touch on, such as public awareness, thus attempting to explain how decision-making can take ordinary people's needs into consideration:

NV: A question regarding public awareness is also posed. Namely, when the public is not informed about where to address problems...is it our fault after all? If all those people [decision-makers] were doing their job well, would we have to go around Greece to inform the public? We are a body since 1994 and no matter how many governments will pass on we will always be here.

Interviewer: Do you feel like the political authorities have cast you aside?

NV: ...nobody came ever to ask us...did you see how the new government has treated the Internet? It promised to give free Internet...did it? Of course not! The previous government promised to educate its management staff on the Internet...did it? Of course not!

Even Vassileios Asimakopoulos, who is in charge of relevant policy initiatives, pointed to the distance between official policy-making and people's everyday lives and the related negative effects on the information society. On the other hand, he presented the policies and practices that he is in charge of as different and sufficiently socially accountable:

Practically, we design our future activities in accordance with existing social concerns and needs... This, however, cannot happen through advertising or any such kind of promotion. Instead, we approach the citizen by making decisions and designing policies that would have a practical impact on the citizen's everyday life...we want more socially accountable policies that will respond to people's needs. **(VA)**

Another policy actor, Manos Voloudakis, President of the Committee for Electronic Commerce, proposed socially-accountable policies as the means for encouraging people to integrate the Internet into their everyday lives and for fighting against public fears in general and in relation to e-commerce more specifically. He argued this even if he claimed previously that politicians cannot do much if society's culture does not change first:

...very few people use the Internet for transactions due to the lack of security and fear of fraud. Nonetheless, I do not think so...most Greek people have never taken a look at the Internet and the way they can deal with online transactions. The majority...at least this is what statistics show... feel distant and even afraid of the Internet. ...we need to draw a more holistic action line that brings people closer to e-commerce... **(MV)**

Nevertheless, actors with an insider's view of decision-making, such as Vassileios Asimakopoulos and Manos Voloudakis, argued that more effort and time are needed before essential policy change is accomplished. In some sense, they attempted to present the difficulties this task holds for the Greek government, while themselves representing relevant governmental practices:

...we try to change things, but huge delays took place in the past...we cannot change the picture in a single year... in our country, there is introversion about new technologies and thus we try to follow the example of other EU members while looking at the situation within the country. We believe there is space for more extroversion. **(VA)**

.....

...who could deny that we need more time as well as more knowledge and intensive work to achieve essential development? **(MV)**

However, when the interviewees were asked about society's contribution to decision-making most supported a top-down view. They maintained that Greek authorities have to be the driving force of decision-making. Even elite actors working on increasing public awareness failed to see the contribution that ordinary people can make to decision-making. It is surprising that those who argue for more socially-accountable processes do not find space for citizens to actively participate in decision-making, somewhat in contrast with the idea of participatory democracy. For instance, Dr. Veronica Samara, who works on Internet awareness in the Safer Internet Programme, argued:

Interviewer: Do you think that the Greek civil society may have a role to play in regulation and policy-making on the Internet?

V.S: ...no...I'm afraid...how can society participate? ...It's not interested...I don't think that at the moment there is potential for social action. It's like a chain...people need to get more interested and stimulated about the Internet first...

Likewise, Nicos Frydas, President of the Greek Hotline, expressed a pessimistic view of the potential of citizens to participate in decision-making. Although he runs a mechanism (the Hotline) that addresses citizens' concerns about online contents to the country's authorities, he considered that the lack of institutional organisation in society does not enable citizens' participation in decision-making:

In other countries maybe, but I do not think this is the case in Greece. We do not have social organisations and institutions that could play an active role in decision-making. I do not see how citizens might have an influence, unless new organisations and institutions emerge. (NF)

Nevertheless, Costas Balictsis at the National Regulatory Authority argued for the catalytic role of public consultations in decision-making. He pointed to the persistent gap between the public and decision-making, and argued that public consultations are an alternative to the top-down solution that most interviewees proposed. Public consultations were presented by this actor as the bridge between politics and society so as to make policies and regulations sufficiently accountable to society:

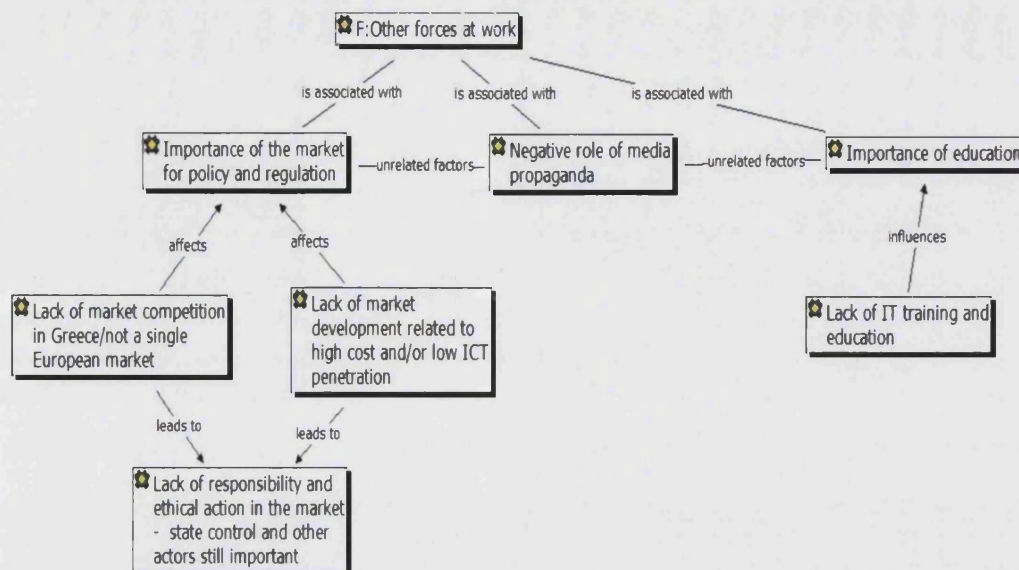
Public consultation is a practice that was given particular attention in the last four-five years so as to allow the unlimited registration of the opinions and proposals of all parties involved. Therefore, participants can be enterprises and services providers, consumer bodies, as well as individuals. In general, there is no limitation. (CB)

5.7 Other forces at work (5th theme)

Apart from the above four themes of discussion, the elite actors referred to other forces that interact variously with society's culture and decision-making in the information society, thus completing the picture of the complexity of digital divides in

the country (see Appendix 5-5). The following figure (Figure 5-8) points more specifically to the forces of the market, media propaganda and education:

Figure 5-8: Other forces at work



Sophia Parisii, a market player, argued about the market's contribution to shrinking digital divides in Greece. She considered that the market exerts effort to make up for the regulatory gaps and insufficiencies in the country's information society: 'As a working person, I think that Greek enterprises try to substitute the official regulatory schemes in order to cure a lot of the existing regulatory weaknesses'. **(SP)** She also supported efforts of the market to protect Internet users, in a way reflecting market interests and her own professional interests:

Clearly, ISPs inform their customers as much as possible to demystify customers' fears and to protect them, as this is in the ISPs' interests. This takes place through guides and online leaflets as well as through software and services that resolve security problems before these reach the end-user. These software and services include protection against spamming, viruses and other harmful programmes. Of course...it is very difficult to inform people about all the measures we take to make them feel safe. **(SP)**

Besides the market player, researchers and decision-makers acknowledged the importance of market liberalisation and development for boosting the Internet in the country. George Papapavlou, an EC Officer, recognised the importance of a fully liberated and dynamic market, at the same time underlining the negative effects of the slow market development on Internet penetration in Greece. He made it clear that the spirit of EC regulation favours the idea that the diffusion of Internet technologies and protection of users go hand-in-hand with well-grounded market development:

Interviewer: Does the market contribute to full implementation of the new regulatory framework?

GP: It contributes...as you know, one part of the framework looks at market issues... If you have market players who offer good services to users and earn money by doing their job well, probably the outcome will be in the interest of the user.

Nevertheless, issues concerning the market ethos and the grim struggle for profit among market competitors question the role of the market and raise the inspectional role of political and regulatory authorities in the operation of market mechanisms. Nicos Frydas, President of the Hotline, argued that market players in Greece lack social responsibility and ethical behaviour. This critique has a certain value as Nicos Frydas is also a market player himself and his criticism yields from his role as a co-ordinator of SAFENET:

The industry is the main shareholder of SAFENET, of which I'm President. However, market players in Greece are not interested in overcoming the above weaknesses. The business-ethics relationship is market players' last priority. Commercial interests determine the ways players behave and the actions they take. I feel that the market in other countries is more responsible. **(NF)**

Elena Spyropoulou, Legal Consultant of EEXI, had a similar view of the market and the role of ISPs in particular. She approached the market from an Internet-user perspective and argued that regulation assigns insufficient responsibility to ISPs, leaving the user unprotected against online security risks:

Interviewer: Let's discuss the responsibility of the ISPs you mentioned. Can you be more specific?

ES: ...for instance, when a cyber-crime takes place, a question arises regarding the extent to which the service provider is liable or can intervene and control the source of the crime... So far, providers have the option to check the various sources of content and to control their customers, but this should not be an option...

Interviewer: Does this affect users' security?

ES: Yes, a lot.

In addition, the elite actors mentioned media propaganda as a source of negativism in Greek society against the Internet. Sophia Parissi, Officer of SEPE, expressed strong pessimism about the media's role and the associated potential of citizens to contribute to shrinking digital divides:

...we constantly see negative media representations of the Internet. For example, child pornography and occasional incidents of suicide on the Internet are presented by the media much more extensively than the benefits of the Internet. We believe that this contributes significantly to social fear, obscurantism and ignorance. **(SP)**

Similarly, Nicos Frydas referred to 'hysterical media propaganda' to explain the varying receptions of different technologies by Greek society (e.g. mobile telephony and the Internet): 'regarding the Internet, the fear of fraud has affected people. This has made us suspicious and reluctant, and the hysterical media propaganda has contributed to this reluctance.' **(NF)**. He argued that the media could instead play a positive role as the medium through which the citizen's voice is heard: '...we need co-regulation, supervision and control of the central authorities. To me, the state and the media, which reflect social concerns, are the drivers of the process.' **(NF)**.

Finally, those working in education and awareness-raising initiatives pointed out the remedial role that IT education and training on safe use of the Internet can play vis-à-vis the weaknesses of the Greek information society. Dr. Veronica Samara of the SafeNetHome Project underlined the negative impact that the current lack of thorough IT training and education in Greek schools has on Internet diffusion and safe use of the Internet:

...we invest a lot in education...it is unacceptable that there is no computer or Internet training in primary schools. At the age of 12 and 13 it is too late to teach a child...what we propose is training from the age of 6 when the child goes to primary school for the first time...parents have to be more informed about the Internet too... **(VS)**.

Also, higher education actors such as Professor Gregory Yovanof from the AIT emphasised the role of education. Professor Gregory Yovanof was, however, more optimistic and foresaw that thanks to education the next generation of Greeks will have a 'healthier' attitude to new technologies:

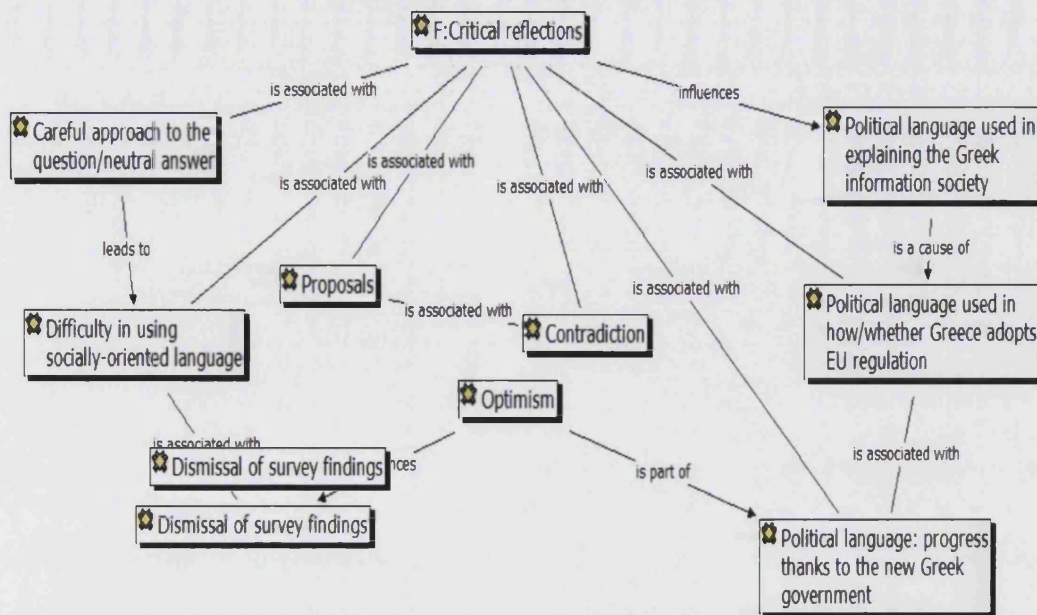
...young generations treat new technologies in a far 'healthier' way, as new technologies enter schools gradually; I think that culture will start changing with schools, while the way young generations can deal with technology efficiently has to be worked out at school. **(GY)**

In summary, the discourses about other forces at work highlighted domains lying in between decision-making and society and their role in digital divides. Also, the elite actors noted the potential of bridging decision-making and society's culture through appropriate market, media, education and awareness-raising initiatives, although they all had negative accounts of the role these forces currently play in the Greek information society.

5.8 Critical reflections (6th theme)

I conclude the discussion of the findings by departing from the thematic analysis of the interviews. In this section, I critically reflect on the interview discourses in order to shed light on the interview process and the value of the texts for the thesis as a whole. Thus, the figure (Figure 5-9) below draws on distances, contradictions and professionally driven discourses in the interviews (see Appendix 5-6):

Figure 5-9: Critical reflections



As shown in the thematic analysis earlier, the interviewees provided tactful answers to or skipped important issues about some questions, whilst they entirely refused to answer other questions. This is explained if one takes into account the professional and ideological background of the elite actors, as well as the goal of the research to trace multiple layers of societal, policy, regulatory and other conditions in the Greek information society. For instance, some times the interviewees were uncomfortable about being asked questions that touched upon issues of immediate professional interest, while the structure of the interviews aimed to avoid the introduction of preconceptions or predispositions in the interviewees' answers. An indicative example is Manos Voloudakis, President of the National Committee for Electronic Commerce, who did not answer a question about the factors that influence the communication between politicians and citizens, while he tried to defend the work of the ministerial services he directs:

...because I'm the new General Secretary...to be honest...I'm not absolutely sure...in general, we try to learn from the past and work on new principles...who could deny that we need more time, more knowledge and intensive work to achieve development? (MV)

Closely related to this kind of distancing in the elite actors' discourses was the difficulty of many actors, particularly the politicians and market players, in using socially-driven language. These actors tended to use a somewhat policy- and market-driven language which either contradicted or altered the often deeper social meaning of the actual arguments. For instance, Costas Balictsis at the National Regulatory Authority used market-oriented language and, as shown earlier, he identified regulatory development with market development.

This led the interviewees to make contradictory statements regarding, in particular, the distinctiveness and future of the Greek information society. Nicos

Frydas, President of the Greek Hotline, acknowledged the distinctiveness of the Greek case, on one hand, and made contradictory remarks when issues of Greek identity and culture were raised, on the other:

Interviewer: Is Greek society characterised by such a culture affecting, in turn, the course of the information society?

NF: We have the example of mobile telephony that enjoyed commercial success soon after its appearance. Hence, Greek citizens accept anything new...there are indications that the Greek citizen can accept the new...it might not be the rule, it might be the exception though.

Contradictory arguments⁷⁶ are an indication of the tactful approach taken by some interviewees. For instance, Athena Bourka, Auditor at the Greek DPA, was caught up in contradictions with regard to the DPA's social impact. She represents the DPA, an independent authority for privacy protection which is, however, part of the Greek system; a system where even independent institutional bodies are closely controlled by the country's political and regulatory authorities:

Interviewer: You mentioned before the low social impact of the DPA, as the majority of people may not be aware of...

AB: (interrupts) ...regarding some of the issues that I mentioned. Again, it depends on the case, as sometimes people may be more aware ...

Nonetheless, most interviewees made some suggestions. They emphasised the need for policy and regulatory action in order for market liberalisation, flat Internet rates, education and training, as well as public awareness and self-regulation to be reinforced. This was accompanied by references to socially accountable policies and regulations in order for society's culture to change. Also, some of those involved in decision-making gave optimistic statements regarding the Internet's future in Greece and despite the current status of digital divides in the country:

Interviewer: In other words, you maintain that the authorities have to come closer...

VA: ...exactly...

Interviewer: ...to citizens and to offering them useful ICT services...

VA: ...exactly, that is right, otherwise we will get in a vicious circle, saying that since there is nothing, citizens should not be bothered while, the state can say, in turn, that since society is traditional it is pointless to work on it. However, we believe that we can break this vicious circle and take the first step in the right direction.

Finally, subjectivity and professionalism marked many of the elite actors' arguments, with policy actors, regulators and market players in particular positioning themselves on the basis of their professional interests. This to some degree explains the contradictions identified in the interview arguments as well as why different interviewees frequently reached similar conclusions when drawing on different aspects of the same issue. Subjectivity and professionalism also illustrate the ambivalent and multi-directional role that ideology and power frameworks play in the elite actors'

⁷⁶ Another example of contradictions in the interview discourses is that the elite actors sometimes accepted statistics on the Greek information society and at other times dismissed them.

discourses. For example, policy-makers such as Vassileios Asimakopoulos tended to use policy-driven language, applauding their political allies for any successes and blaming their political opponents for any failures in the Greek information society:

Interviewer: ...you said that something changed since the elections of 2004...

VA: Yes there is some activation now. Indicatively, the implementation rates of the Programme tripled last year in comparison to the previous three years. Namely, the work carried out in the last eight months of 2004 and since the government changed equals the work done between 2001-2004.

These critical reflections on the elite actors' discourses allow the thesis to 'read between the lines' of the interviews, identify limitations in the interview findings and shed light on the role of the ideology-power complex in the interview discourses. The section below accounts for the interview findings in relation to the answers provided to the thesis' research questions and in light of these critical reflections.

5.9 *The elite actors' interviews and research questions*

The insights gained in the elite actors' interviews indicate that the notions of everyday life and resistance to technology, on one hand, and socio-centric approaches to policy and regulation, on the other, can offer considerable space for more informative research of digital divides in Greece. At the same time, the interviews raised the interconnections between socio-cultural, political and regulatory forces in the Greek information society and pointed to implications for the future of the information society given the ideology-power complex.

More specifically, the interviews explored the first principal research question, sketching the traits of the Greek information society:

I. *What are the general characteristics of the Greek information society?*

The interviewees approached the Greek information society and its distinctiveness from a socio-cultural and decision-making perspective, to a certain degree confirming the thesis' conceptual framework. The overarching role of culture was raised in the interview discourses in relation not only to society but also to decision-making in the country, as it was argued that techno-phobia in society and the public administration is the main driver of the low adoption of new technologies in Greece. The interviewees stressed the importance of creating a fully informed society by employing more socially accountable policies and awareness-raising initiatives. They also underlined the critical role that sufficient regulation plays, criticising Greece's delays in implementing EU regulation. Overall, the expertise and role of the elite actors played a significant role in how they viewed the role of culture and the emphasis they placed on what they considered the reasons for low Internet adoption in Greece.

In addition, the interviewees brought up pragmatic factors that discourage Internet adoption in Greece: insufficient infrastructure, a lack of satisfactory online services, the high cost of Internet services and networks, as well as a lack of social action and institutional organisation. Further, they pointed to other parameters that interact variously with society and politics and which complete the complex picture of digital divides in the country. These are the parameters of market liberalisation and development, media propaganda, as well as IT education and training, which were all discussed in the interviews as domains lying in between decision-making and society. More specifically, the elite actors articulated negative accounts of the current role of these domains in the Greek information society, problematising the role of the structures mediating the communication and interaction between society and politics. This constitutes an addition to the literature-based knowledge of the research since such structural factors have not been examined in the context of the thesis.

Besides the first principal question, the interviews explored all the research questions operationalised in Chapter 4 (Table 4-1); questions that help explore the other three principal research questions.

2. *What are the cultural characteristics of Greek society of past and current times?*

Most interviewees recognised the existence of a cultural identity that drives, in their view, Greek society towards maintaining a traditional lifestyle and dissociating itself from the increasingly powerful world of new technologies. This identity was decoded by the interviewees in a pessimistic way as they referred to the existence of a non-technocratic and techno-phobic culture in society, to social ignorance and what they perceived, in general, as the Greek lifestyle. These arguments brought up the notion of citizenship, with the elite actors arguing that Greek people lack a sufficient sense of citizenship since they behave more like individuals and less like citizens. At the same time, the interview discourses shaped a puzzling picture of Greek distinctiveness, with contradictory evidence about technologies that Greek people accept enthusiastically (e.g. mobile telephony) being often used by the interviewees against the argument of Greek distinctiveness.

3. *More specifically, how do the cultural characteristics of Greek society take shape in the Greek information society?*

Elite actors who are in close communication with ordinary people presented the techno-phobic and non-technocratic culture as dominant in Greek society. At the same time, they placed different weight on the forces that drive techno-phobia. Low public awareness, insufficient familiarity with the Internet, the high cost of Internet services, and low quality of Internet services and infrastructure were some forces mentioned in the interviews. These forces and the different value that different elite actors attributed to each of them reflect the interviewees' own experiences and roles in the country's information society. Regardless of the frequently contradictory voices

heard in the interviews, these arguments specifically confirm the notion of distinctiveness of the Greek information society that the thesis has drawn upon.

4. *Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?*

A further decrease of public awareness, social resistance, lack of social action and institutional organisation in everyday activities, as well as a persistent lack of familiarity with new technologies were some issues the interviewees pointed out as parameters resulting from the techno-phobic culture of society. Actors with different roles in the information society pointed to different issues arising from the techno-phobic culture of society, but their discourses contributed to the same picture: the picture of a society that refuses to integrate the Internet into everyday routines and resists it. Nevertheless, elite actors who participate in decision-making evaluated the traits of Greek society in a socially distant way, identifying, for instance, the notion of 'citizen' with that of 'consumer'.

5. *What is the general picture and key features of policy- and regulation-making in Greece?*

The interviewees argued that poor co-operation, bureaucracy, a lack of modernisation and techno-phobia dominate the Greek public sector and overall decision-making practices in the country. They underlined these parameters when questions concerning the forces that undermine the implementation of EU telecoms regulation in Greece were posed. Looking closer at the interview discourses, one can observe that professional interests influenced the elite actors' views as most attempted to defend their own work, looking at the liability of policy and regulatory bodies in the country from different points of view. Also, some actors brought up self-regulation and co-regulation as alternatives to state-driven regulation; alternatives, however, that were seen as currently hindered in Greece because of the lack of social organisation and political action on one hand and due to conflicts of interest on the other.

6. *More specifically, how does policy- and regulation-making take shape in the Greek information society?*

The elite actors argued that ordinary people cannot play an important role in decision-making due to a lack of social organisation, techno-phobic culture and lack of citizenship. They suggested that change should begin with the country's political and regulatory authorities. On the other hand, they stressed that socially accountable policies and regulations should be in place so that the traditional and non-technocratic character of society can change. They emphasised the importance of socially accountable policies by mostly reflecting on their own expertise and role in the Greek information society. Some mentioned the role of public consultations as an alternative for change to come from grassroots. However, when they were asked about the possibly immediate contribution of society to decision-making, most supported a top-

down approach, maintaining that official authorities have to drive decision-making. Even actors who aim to increase public awareness of the Internet failed to see the contribution that ordinary people can make by participating in decision-making processes. It is quite surprising that those in favour of more socially accountable processes do not provide any space for ordinary people to actively participate in decision-making, thus contrasting with the idea of participatory democracy.

7. *What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?*

Politicians, regulators and researchers admitted the authorities' liability for the techno-phobia and non-technocratic culture in Greek society. They talked about political liability in terms of practices and mindsets that prevail in the country's decision-making processes. They more or less emphasised regulatory delays, the existence of a non-technocratic and inefficient public administration, and the lack of appropriate regulatory initiatives and the overall socially non-accountable character of the public administration. The emphasis they placed on some issues also reflects their own experiences and roles in the country's information society.

8. *What are the key parameters of the dynamic between society's culture and decision-making in digital divides in Greece?*

The elite actors highlighted a research area overlooked in national research as they approached cultural traits and trends as matters that go beyond society and ordinary people's everyday lives. They argued that the techno-phobic and resistance culture in Greece extends beyond the societal domain and is closely linked to decision-making practices, influencing, among others, Internet adoption in the country. Thus, they illustrated the close interactions between society and politics that shape multiple domains of activity and the complex web of actors and factors in policy, regulation and society that drive digital divides in the country.

However, the links between society's culture and decision-making and their influence on the Internet's integration into ordinary people's everyday lives were approached differently by different elite actors. Although the actors stressed that policies and regulations must come closer to the needs and particularities of society, those involved in decision-making defended their work and argued that the government they represent has already attempted to do so. In broader terms, there seems to be a distance between the forces raised in the interviews as the interviewees underlined these forces from more than one perspective and on the grounds of the interests they represent in the information society. On the other hand, the market seems to sit in between society and politics, being presented in the discourses as a force that can make up for the failures and insufficiencies of societal, policy or regulatory action in the country.

9. *How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?*

On one hand, a culture of resistance and techno-phobia in Greek society were perceived by the interviewees as being reflected in the public administration, influencing the rhetoric and practices of decision-making on the Internet. On the other hand, the interviewees claimed decision-making should have a stronger social orientation, thus shedding light on the importance of awareness-raising and the incorporation of the Internet into people's everyday lives. These claims support a sociological approach to policy and regulation in the information society as well as the examination of ICT adoption from an everyday perspective, strengthening the grounds upon which this thesis has theoretically relied.

Nevertheless, the elite actors provided little space for citizens to influence decision-making, whilst IT education, market development and positive media propaganda were underlined as other means to achieve cultural change. Representing elite bodies of action, the interviewees argued that the solution to digital divides is to come from policy and regulation, overlooking the role the public could play. This is important if one considers that the interviewees thought of the public as the grounds on which politics is based and which shape political culture. They made similar claims when they pointed to the role that market development and continuous education could play in development of the information society, while being very critical of the role that media propaganda has played in the rejection of new technologies by most Greek people. Such arguments indicate to an extent the role the interviewees' professional status and profile played in the way the cause(s) of and solution(s) to digital divides were presented in the interview discourses.

Before concluding, it is worth highlighting issues of professionalism and 'conflict of interests' in the interview discourses. Many interviewees had difficulty using socially-oriented language as they downplayed the role of society in bringing about positive change in the Greek information society. Particularly interviewees who participate in policy- and regulation-making used politically-founded language in their efforts to explain the current situation and possible future of the Greek information society. In addition, the apparent consensus among the interviewees has to be viewed critically from an expertise and 'conflict of interests' point of view. Although the elite actors have different types of expertise, they all play a more or less important role in the country's information society. Most reflected on issues concerning digital divides taking a top-down approach and representing interests (e.g. market, political etc) which are often at a distance or even in contrast to and not perfectly understandable by society. Although such a consensus was disrupted by contradictions and tensions, especially when sensitive accounts of responsibility were given, the analysis in the

chapter aimed to identify common themes and prominent arguments in the interview discourses, without fully revealing the diversity of these discourses.

5.10 Concluding remarks: interview findings and the way to more focused research

Certain aspects of the complex meshwork of ideology and power relations, practices and discourses in the Greek information society were illustrated in the elite actors' interviews. The chapter presented a thematic analysis of the interview findings and took a selective approach to key interview arguments on the basis of the frequency of their appearance, the number and status of the interviewees, and the association of the arguments with the thesis' theoretical framework and research objectives. On the other hand, a critical approach to the interview discourses allowed the chapter to map out to some extent the complexity of these discourses and the answers they offer to the research questions.

The discussion in this chapter confirms the analytical validity of the historically rooted cultural legacies of Greek society. Also, it highlights the elite actors' argument that these historical legacies and their underlying ties with policy and regulation drive the course of Internet technologies in the country. The interviewees confirmed the existence of a culture of resistance and techno-phobia in Greek society, and argued that this culture is reflected in the public administration, thus influencing the rhetoric and practices of decision-making on the Internet. At the same time, they claimed that decision-making should have a stronger social orientation, emphasising the importance of awareness-raising and incorporating the Internet into people's everyday lives. In addition, the interviewees stressed the existence of more pragmatic forces of low Internet adoption in the country such as the lack of sufficient infrastructure and online services, the high cost of Internet services and networks and the lack of institutional organisation, along with the mediating factors of media propaganda, IT education and market development. Although these forces are not looked at in depth in the thesis, they are not entirely ignored as Internet users and non-users are asked in the next two phases of the research to report on what encourages or discourages them from adopting the Internet.

Lastly, discrepancies in the texts about the progressive character of Greek society, the future character of decision-making, the widely overlooked role of the public in the closure of digital divides, the role of the market, and the various dimensions of the notion of Greek distinctiveness point to the rhetoric employed by the interviewees. This rhetoric invites the research to adopt a critical approach to dominant interview discourses, whereas stronger connections to the theoretical

framework and the research questions, as well as further considerations of the implications for the next phases of research must be made. Therefore, the thesis extends its analytical efforts through a large-scale survey and focus-group interviews of ordinary people in Greece, thereby shedding light on ordinary people's views and practices, and juxtaposing the politically-founded language of the elite actors with the discourses of ordinary people.

The qualitative insights into the research questions obtained in the elite actors' interviews set the grounds and pave the way for a more focused and critical analysis of digital divides through quantitative and qualitative research of the views of ordinary people in the second and third phases of the research, respectively. In the societal domain, resistance, a lack of integration of technology into everyday life, a lack of awareness, social ignorance, a lack of social action and low levels of citizenship are the parameters further explored by surveying and interviewing ordinary people. In the policy and regulatory domain, decision-making delays, a lack of social accountability, as well as inefficiency and a lack of social awareness of policies and regulations are the parameters explored when ordinary people are surveyed and interviewed.

The data collected in all three different phases of the research are evaluated for their research contribution in comparison to other research in the field and are synthetically discussed in Chapter 9.

6. Digital divides in Greece: the role of society's culture and decision-making. A descriptive approach to quantitative data

6.1 Chapter Overview

This chapter introduces the survey data collected in the second phase of the research and reports the results of the descriptive analysis. Section 6.2 introduces the survey aims. Section 6.3 reports descriptive findings and the statistical significance of demographics. Section 6.4 summarises the main findings and paves the way for the modelling analysis in Chapter 7. The survey explores ordinary people's decisions to adopt the Internet or not, as well as their related perceptions and evaluations. It thus provides a bottom-up account of Internet adoption in Greece and raises issues to be qualitatively cross-checked and examined in the final phase of the research, namely focus-group interviews of a sub-sample of surveyed individuals.

6.2 Introduction

After setting the grounds with the top-down overview of the Greek information society in the elite actors' interviews, in the second phase of the empirical research I conducted a survey of ordinary people's attitudes to the Internet and Internet policies and regulations in Greece⁷⁷ (for more on the research design, see Chapter 4). The following operationalised research questions (see Chapter 4, Table 4-1) were initially examined qualitatively in the elite actors' interviews and in this phase were explored quantitatively from the point of view of ordinary people:⁷⁸

1. Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?
2. What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?
3. How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?

⁷⁷ Although the scope of the survey was the urban area of Attica, where almost half of the Greek population resides, I use the terms 'Greece/Greek' in the discussion of the survey findings.

⁷⁸ The elite actors set the ground by examining all the operationalised research questions. Then, only three of the questions – those that could provide more insights and could be explored from the point of view of ordinary people – were examined in the survey and focus groups. For more, see Chapter 4, Table 4-1.

Specifically, in this phase I attempted to trace and decode people's attitudes⁷⁹ to the Internet relative to everyday and resistance culture and the role of Internet policy and regulation. To achieve this aim, I quantitatively explored the following questions:

- As regards Internet adoption (i.e. use, quality of use etc): what is the Internet diffusion in Greece?; which conclusions can be reached about the quality and breadth of Internet usage?; are users and non-users in Greece concerned with online risks?
- From an everyday life perspective: how do users and non-users perceive the Internet's role in their everyday lives?; are Greek people marked by a dismissive attitude to the Internet and its role in their lives, and what are the differences between users and non-users?
- From a policy and regulation perspective: how do users and non-users evaluate the efficiency of national and EU policy and regulation for the Internet?; how aware are users and non-users of current Internet policies and regulations and the authorities in charge, and how satisfied are they with them?

The chapter discusses these questions by presenting descriptive results for all survey questions, providing full demographics in the Appendix, and noting significant demographic differences in the main text. Thus, these questions will allow the explanatory and hypotheses testing found in Chapter 7, where modelling techniques of statistical analysis apply.

6.3 *Descriptive analysis and significance of demographics*

This section aims to present the basic survey findings concerning Internet usage, non-usage, patterns of usage, people's evaluations of the Internet, as well as people's satisfaction and awareness of Internet policy, regulation and authorities. Demographics are tested in all cases⁸⁰ and statistical significance techniques apply in order for the differences between users and non-users to be identified. The analysis follows the thematic structure of the questionnaire, with general issues of Internet use and non-use examined first and specific issues concerning society's culture and decision-making then examined. Regardless of the large size of the survey sample, care

⁷⁹ 'Attitudes' is an indicator that embraces respondents' beliefs, perceptions or opinions, as well as behaviours.

⁸⁰ The sample demographics are presented in Chapter 4 (p. 97). There it becomes obvious that I can compare with gender, age and education, but not with income, as 67% of the respondents did not reveal their family income. Since the data have been weighted according to the population demographics (see Chapter 4, p. 96), the discussion of the findings refers to the weighted body of data so as to generalise the findings to the whole population.

was required to test the data's representativeness and a certain selection strategy was followed to paint a clear picture of the key indicators.

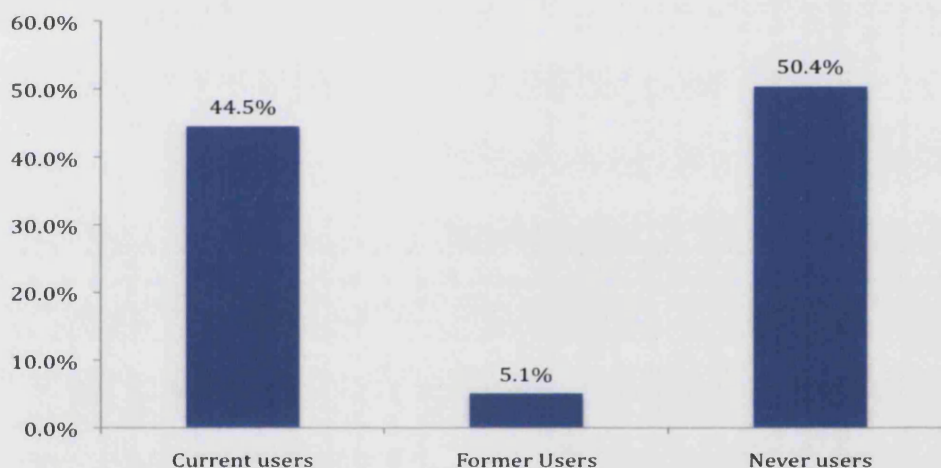
6.3.1 *Media availability & Internet use*

This section reports Internet use and examines issues of access so as to conclude about whether access still matters for Internet use.

Internet use by individuals (Q5)

What percentage of the population uses the Internet? Internet use is a useful indicator when other Internet adoption variables are measured and when it is a control variable for testing other indicators.

Figure 6-1: Internet use by individuals (Q5)



Base: N=1001

As shown in the above figure (Figure 6-1), 44.5% of the population uses the Internet and/or email, while 5.1% have used the Internet in the past but are non-users now. Also, 54.8% of the population use a computer, whereas 20.8% of computer users do not use the Internet. These figures diverge from other national or European surveys for Greece as computer and Internet usage in Greece usually ranges between 20-30%. This difference can be explained by the regional scope of the research, as residents in urban regions are more likely to use a computer or the Internet than those living in rural or semi-urban regions. This research focuses on the urban region of Attica only since the aim is not to report computer or Internet penetration per se, but to collect a sufficiently large amount of data from Internet users and non-users to allow the research questions to be explored from user and non-user perspectives.

Internet use and demographics

What are the socio-demographics of Internet use and what does this imply for gender, age, education and income divides? Research perceives demographics as a main

source of divides. This survey finds interesting trends of use among different socio-demographic groups, as shown in the table (Table 6-1) below.

Table 6-1: Internet use by demographics (%)

Pearson's Chi-Square	Demographics		Internet users	All
33.062(b), df= 1; Asymp. Sig. (2-sided)= 0.000	Gender**	Male	59.6	49.5
		Female	40.4	50.5
225.383(a), df= 3; Asymp. Sig. (2-sided)= 0.000	Age**	15-24	26.7	17.2
		25-39	44.9	30.5
		40-64	27.0	36.2
		65+	1.3	16.2
232.058(a), df= 7; Asymp. Sig. (2-sided)= 0.000	Education**	None, or grades 1-8	0.7	6.4
		High school incomplete	8.8	17.4
		High school graduate	22.5	29.6
		Business, technical, or vocational school	11.9	12.6
		Some college, no 4-year degree	11.2	6.4
		College graduate	33.7	20.8
		Postgraduate training/prof.	10.8	5.4
13.916(a), df= 5; Asymp. Sig. (2-sided)= 0.016	Income*	Less than 10,000 euros	7.2	9.7
		10,000 to under 29,999 euros	18.2	20.4
		30,000 to under 49,999 euros	4.3	3.2
		50,000 to under 99,999 euros	0.7	0.4
		100,000 or more euros	0.2	0.1
153.680(a), df= 2, Asymp. Sig. (2-sided)= 0.000	Children in household**	Yes	32.1	53.2
		No	66.7	45.0

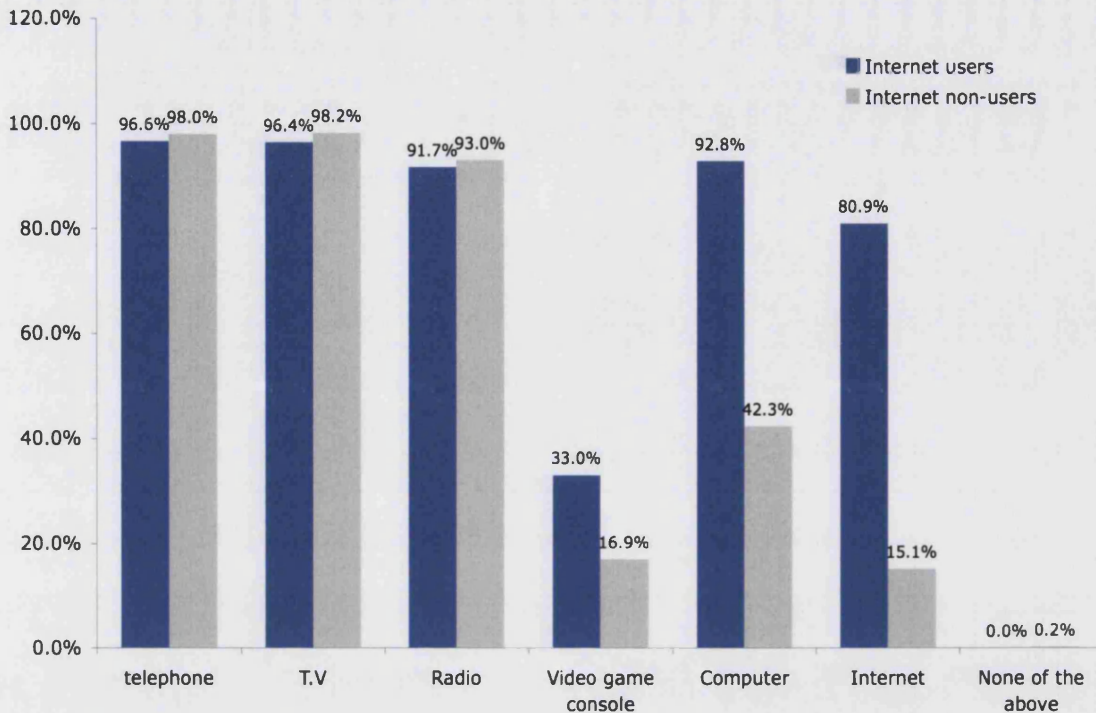
Base= All, N=1001. *=significant at $p < 0.05$, **=significant at $p < 0.01$

In the above table one sees that 59.6% of users are men, suggesting the presence of a gender divide to some extent. In terms of age, people aged 65+ are the least likely to use the Internet as only 1.3% of users are over 65 years old. Also, most users (55.7%) have attended a college or a higher education institution as the lower the education the less likely people are to use the Internet. Questionable conclusions are reached for the role of income since, although the higher the income the higher the use, 29.7% of users appear to have a family income under 49,999 euros and 69.4% of users do not reveal their family income. Interestingly, 32.1% of users are in households with children and 66.7% are in households without children.

Media availability: questioning access barriers

Does Internet use relate to access to media equipment? In media research, the level and characteristics of Internet usage are often related to the usage of other media, patterns of media use and barriers to media access. However, the following figures somewhat challenge such arguments, pointing to the significant access of non-users to a computer and the Internet at home.

Figure 6-2: Media availability at home (Q1)



Base: N=1001

According to the above figure (Figure 6-2), not particularly interesting patterns emerge for the technologies of telephone, TV and radio, whereas some association emerges between Internet use and the availability of video game console, computer equipment and Internet access.

More specifically, 16.9% of Internet non-users have a video game console and 42.3% have a home computer. Also, 15.1% of them have home Internet access. These figures support the argument that non-use goes beyond access. Thus, people may be digitally excluded because other external barriers discourage them from use or because they intrinsically and behaviourally tend not to use the Internet.

In summary, the survey found that Internet users are more likely than non-users to be men, younger, more educated, better off, and without children. Also, although Internet users are more likely than non-users to have home access to technologies such as a video game console, computer and the Internet, Internet and computer access are not sufficient predictors of Internet usage. Beyond Internet use figures, demographics and access barriers to Internet use, the survey aimed to explore patterns of Internet use and their implications for quality of use and Internet adoption in general.

6.3.2 *Patterns of Internet use and implications for quality of use*

Besides questions of who and how many use the Internet, a complete picture of Internet adoption requires the research to examine patterns, quality and breadth of use, including risks and opportunities for Internet users.

Place of Internet use: home and work

The question of in which place people go online (Q6) is important as it can reveal a lot about Internet access and activities online. Home (83.5%) and work (47.9%) are the two places where from most people go online. On the other hand, public or open spaces such as community and municipal centres are not used at all for accessing the Internet, indicating Internet usage is a relatively private activity in Greece which people do not want to make publicly visible. In demographic terms, education seems to influence where people access the Internet from. For instance, the majority (53.1%) of those using the Internet from home have not received a university education, and most (65.9%) of those using the Internet from work have received a college or university education. Also, age is important as users over 65 years and 85.7% of those aged 15-24 access the Internet from home, with the workplace being significant for the 25-39 and 40-64 age groups, which constitute the most work-active groups of the population (see Appendix 6, Table A.6-1).⁸¹

The question of slow or fast Internet access for home Internet users can illustrate further possible limitations to access and implications for quality and breadth of usage.

Dial-up users: outnumber 'fast' users & are not interested in broadband

How do home users access the Internet and what types of Internet connection dominate (Q7)? Dial-up and DSL-enabled phone line are the two prominent connection types, accounting for 90.6% of the total number of Internet connections.⁸² The higher the income the more likely users are to have either a DSL or high-speed Internet connection (see Appendix 6, Table A.6-2-A). In addition, slightly more than half (57.8%) of those with home Internet access via dial-up express their desire to obtain broadband.⁸³

Next, the question of time length of Internet use is addressed as another measure with implications for quality of use and the overall picture of Internet adoption.

⁸¹ From this point on, when I advise the reader to check an Appendix table, the purpose is that they check the detailed figures and statistical significance of demographics.

⁸² Yet this question concerns the identity of those with broadband. This question is explored in Chapter 7 where the association of this indicator with patterns of use and attitudes to the Internet is tested.

⁸³ Socio-demographic indicators do not appear to have a significant correlation with dial-up users' 'desire' for broadband or not (see Appendix A, Table A.6-2-B).

Decreasing number of new users in Greece?⁸⁴

What is the proportion of new Internet users in Greece? The majority (60.3%) of Internet users (N=445) started using the Internet more than three years ago, one-quarter (24.6%) started two or three years ago and only 15.0% started using the Internet within the last year (5.8% in the last six months and 9.2% a year ago). These figures indicate the relatively slow increase of Internet adoption in Greece that is hardly comparable to the fast changing adoption rates in other European countries. Young users are more likely to have started using the Internet in the last year, while those with no or primary education (66.6%) and those who have not completed high school (39.5%) are similarly more likely to have started using the Internet in the last year (see Appendix 6, Table A.6-3).

Frequency of use is next measured as another key indicator of Internet use patterns, also pointing to the Internet's role in people's lives in general.

Internet users in Greece are frequent users (Q.9)

How often do Internet users in Greece go online? Internet users (N=445) in Greece are frequent users, with the majority (66.9%) using the Internet once or several times a day, 28.0% once, twice or several days a week and only 4.3% less often. Men are more likely to use the Internet more often than women, with 70.6% of the former and 61.1% of the latter using the Internet at least once a week (see Appendix 6, Table A.6-4).

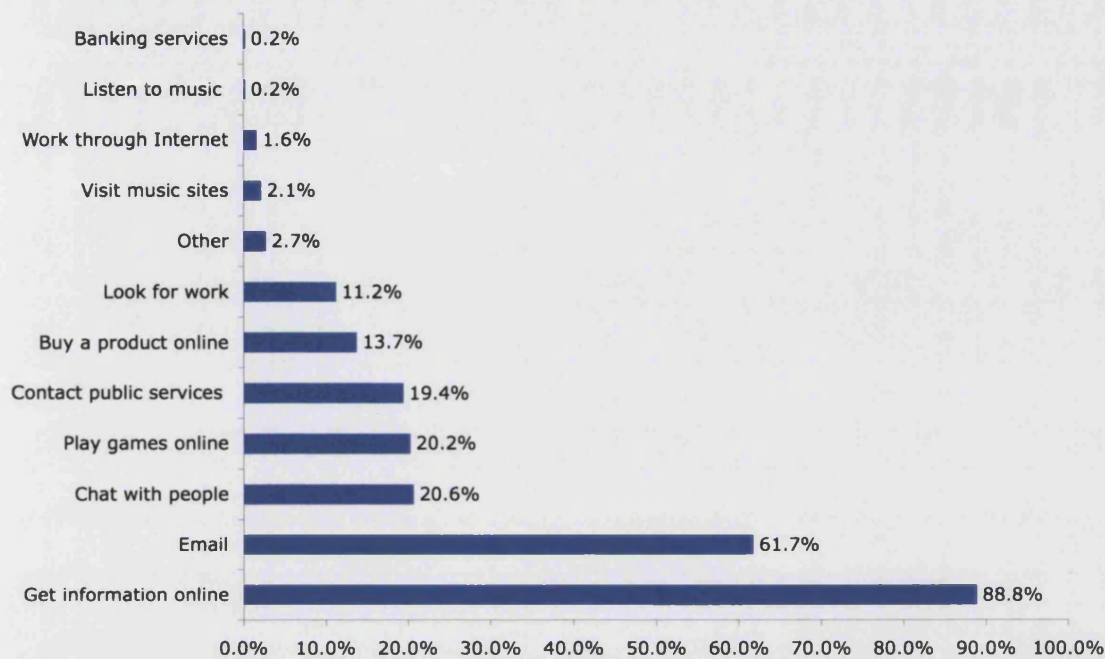
High frequency of use often implies high integration of the Internet in users' lives. However, what is considered to provide more valid measures of breadth of usage and integration of the Internet are the activities users engage in when going online.

Greek Internet users: information seekers and email users

What are the most popular activities of Internet users in Greece when they go online?

⁸⁴ This indicator (Q.8) traces the history of Internet use in Greece.

Figure 6-3: Please tell me if you ever do any of the following when you go online... (Q10)



Base: N=445 (Internet users)

Most Internet users are information seekers (88.8%) and communicate with others via email (61.7%), whereas other online means of connectivity, communication and interaction are less common (Figure 6-3). Online activities vary among different socio-demographic groups of users. Well-educated users are more likely to be involved in creative activities, such as purchasing products online, job searching and communication with public services, and less likely to be involved in entertainment activities online, such as games and chatting (66.7% and 33.3%, respectively).⁸⁵ On the other hand, youth play more games online (43.7%), chat more (39.5%), use less email (49.6%) and look less for jobs (6.7%) than older users, with adults aged 25-39 (22.4%) and 40-64 (27.5%) being those mainly using the Internet to contact the public administration.⁸⁶ Also, interesting variations can be observed among people of different household status, income and gender (see Appendix 6, Table A.6-5).

Thus, there is a clear line of preference for information seeking and contact activities online, whereas more participatory online activities appear weak among Greek Internet users. Although these results are similar to what is observed in other countries, lower percentages appear in Greece for certain online activities, as shown in Chapter 9 (pp. 259-60).

⁸⁵ The only exception is users who have graduated from a college, as 35% of them chat online.

⁸⁶ These groups are society's workforce and thus in need of contacting the public administration.

6.3.3 Online risks & constraints on functional use: implications for Internet literacy

Besides actual use and its quantitative characteristics (e.g. time spent online, frequency of use etc), online risks constitute a parameter that may constrain functional usage, thus being an important indicator of Internet adoption. The survey examined users' awareness of, concerns about and security against online risks, pointing to the implications for Internet literacy (further analysis in Chapter 7).

Awareness of online risks: viruses and cookies

Before accounting for users' perceptions of online risks, it was important to ask 'how aware are users of online risks?', as this question (Q.II) allowed a better understanding of popular discourses in Greece about Internet risks.

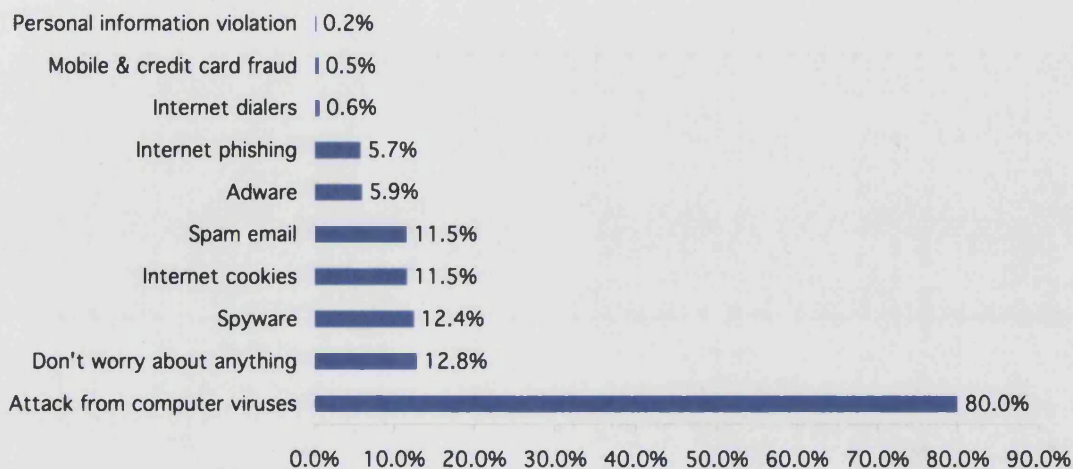
Internet users' awareness is high for viruses (98.5%) and Internet cookies (57.2%), but relatively low for spam (48.5%),⁸⁷ spyware (46.5%), adware (32.6%) and Internet phishing (28.8%). Men and those who have attended higher education are more likely to be aware of online risks than those with a low or middle education. Less importantly, young users, users with a high family income and those in households without children are more likely to be aware of some types of risks (see Appendix 6, Table A.6-6).

These awareness figures raise the question of the importance specific online risks hold for users, thus influencing quality and other parameters of usage.

Virus attacks as a source of fear: insecurity and non-confidence

Do online risks influence the experience of use and which risks are the most influential? How does this link to the awareness figures above?

Figure 6-4: Do you worry about any of the following when you use the Internet? (Q13)



Base: N=445 (Internet users)

⁸⁷ Based on the assumption that all email users encounter spamming, awareness of spamming (48.5%) is low.

The large majority (80%) of Internet users are worried about virus attacks. On the other hand, 12.4% are concerned about spyware, 11.5% about Internet cookies and spam and less about adware and Internet phishing (5.9% and 5.7%, respectively) (Figure 6-4).⁸⁸ In demographic terms, gender, age and the existence of children in the household have a limited influence on users' fears about online risks. Men are less concerned about viruses and more concerned about spam than women. Older users are more concerned about adware and Internet phishing and those with children in the household are more concerned about viruses (see Appendix 6, Table A.6-7-A).

Regarding users' confidence in averting online risks, only a small minority (10.5%) of home users are 'very confident', pointing to the possible impact of online risks on the using experience as a whole. Female and educated users are less likely to be confident than men and users with no, primary or secondary education (see Appendix 6, Table A.6-7-B).

However, a key issue related to online risks and users' Internet literacy is the tools users employ to address online risks.

Security limited to anti-virus applications: knowledge and training needed

Which security tools are popular among users and why do some users not use any? (Q14.A).

Anti-virus applications are the most popular among users who have used tools for Internet security at home (N318): 90.0% have used anti-virus software and only a small number have used other tools for online security (19.8% spyware remover, 17.4% adware remover, 14.7% spam killer and 10.6% anti-phishing). Male users are more likely to use a firewall, people with a low income are more likely to use anti-virus and users in households without children are more likely to use spam-killer software (see Appendix 6, Table A.6-8-A).

A lack of sufficient knowledge is the main reason users do not use any online security technologies or tools. Most do not use such tools because they 'don't know how to install them' (40.2%), 'don't know how to use them' (31.1%)⁸⁹ or 'don't know what they are for' (29.7%) (see Appendix 6, Table A.6-8-B).

Comparing these security tool figures with awareness of (Q.11) and concerns about online risks (Figure 6-4), it appears that users are more likely to use security tools and technologies when they are aware of and concerned about the effects of specific online risks. Therefore, a possible association between awareness of, fears for

⁸⁸ It is worth looking at these findings further by testing their association with awareness of online risks (Q.11). This association is tested in Chapter 7.

⁸⁹ 15.1% of users are not concerned about online security and 3.9% neglected using such tools. Factors such as cost are not important, with 5.4% of users not using security tools because 'they are too expensive'.

and confidence in averting online risks with users' decisions to use Internet security tools against such risks is tested in Chapter 7 by statistical modelling.

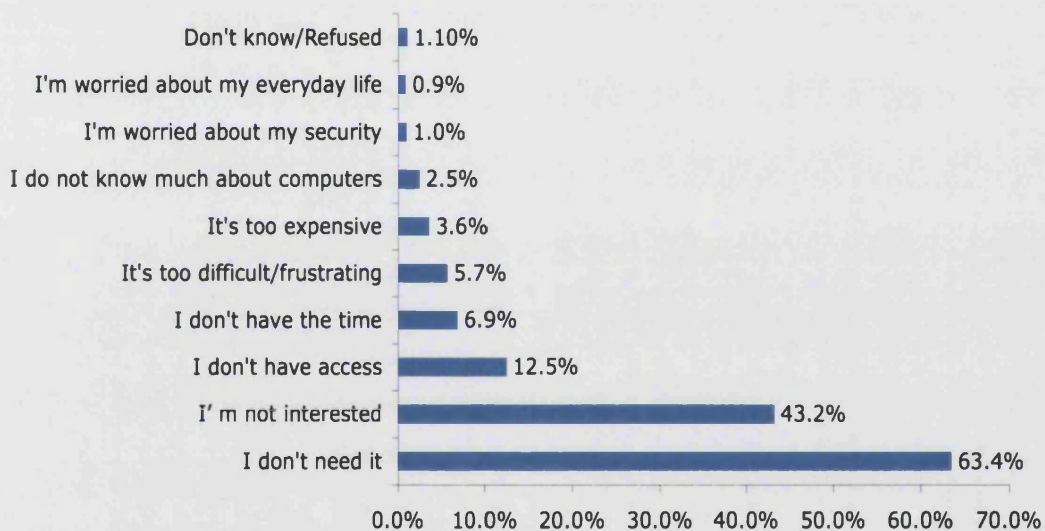
6.3.4 Non-use, dismissive culture and future prospects

Departing from issues of use, the survey addressed questions of non-use and use from a non-user perspective. The survey found that a culture of dismissal of and resistance to the Internet exists in Greece. This finding is tested in Chapter 7.

Reasons for non-use: lack of interest in and need for Internet use

What are the demographics of non-users and the forces driving them not to use the Internet?

Figure 6-5: What are the reasons you don't use the Internet or email? (Q16)



Base: N= 556 (non-users)

Women, middle-aged or old people and those in households with children are more likely to be non-users, while the more educated and the better-off are less likely to be non-users (see Table 6-1). As far as the reasons for non-use are concerned, a lack of need (63.4%) and interest (43.2%) are clearly the two most important reasons for the majority of people in Greece not using the Internet. On the other hand, commonsense factors such as lack of access (12.5%) and time (6.9%), lack of skills and difficulty in use (5.7%) and high cost (3.6%) are less important reasons for non-use (Figure 6-5). The old-aged, those with a low education and income, as well as those in households with children are more likely to have no interest in or need for the Internet (see Appendix 6, Table A.6-9). What lies behind such a lack of interest and need, and how non-users conceptualise, understand and evaluate the Internet are issues discussed later, aiming to identify the driving forces of non-use mainly from a cultural and policy or regulatory perspective.

Within the group of non-users one can identify those who have never used the Internet and those who have used it but dropped out for some reason(s). The second category of non-users is interesting and sheds light on the underlying factors that drive people in Greece away from the Internet.

Dropping out and a lack of interest in or need for the Internet

What forces people to drop out and what does this show in comparison to the reasons people do not to use the Internet at all? (Q20.A).

9.2% of non-users are former users (N=51), namely the same percentage as current users who started using the Internet last year (9.2%). Men (14.0%) and youth aged 15-24 (30.8%) are more likely to be former users than women (5.8%) and middle-aged or old non-users (6.2% and 0.6%, respectively). Also, well-educated and non-users in households without children are more likely to be former users (see Appendix 6, Table A.6-10).

In terms of reasons for dropping out, a lack of need (38.0%), interest (15.5%) and time (14.7%), as well as loss of access (22.7%) are the forces driving Greeks to drop out. On the other hand, security concerns (2.1%), cost (5.8%), difficulty in use (8.7%) and concerns about the impact of the Internet on everyday life (2.5%) do not influence dropping out to a great degree.⁹⁰ These figures illustrate that a lack of interest in and need for the Internet are the two dominant forces of non-use in general.

Nevertheless, it is interesting to examine not only the current state of non-use but also its future prospects. Thus, the survey looked at the long-term impact of the key forces of non-use and, thus, at the likelihood of non-users using the Internet in the future.

Future prospects: non-users not turning into users

The future prospects of Internet use are addressed by a question concerning non-users' desire to use the Internet in the future and by another question investigating non-users' self-evaluations of how likely they are to use the Internet in the future.

Table 6-2: Internet use in the future

Prospects for the future	"No"
Would you like to start using the Internet and email, or isn't that something you're interested in? (Q17)	81.9%
How likely do you think it is, if at all, that you will start using the Internet or email someday? (Q18)	76.4%

Base: N=556 (non-users)

⁹⁰ The only significant demographics are: 'You are not interested' by education; 'You are worried about the impact' by education; 'The computer was out of order' by education; 'You are not interested' by income; 'You are worried about the impact' by income; and, 'I have lost access' by children in the household.

81.9% of non-users are not interested in using the Internet in the future (Table 6-2). The young, well-educated and those in households without children are significantly more likely to use the Internet in the future (see Appendix 6, Table A-6-11-A).

As regards non-users' self-evaluations of the possibility of future use, the large majority (76.4%) think they are unlikely to start using the Internet in the future, confirming the picture so far of non-users' dissociation from the Internet (Table 6-2). Men, the young, well-educated and those in households without children are significantly more likely to start using the Internet in the future, confirming more or less the demographics for non-use in general (see Appendix 6, Table A.6-11-B).

Hence, it appears that the great majority of non-users are not likely to turn into users in the future, thus pointing to matters of greater significance for future Internet adoption in Greece. This finding also strengthens the argument that the rejection of the Internet by non-users is the main force for the low Internet adoption rates in the country.

6.3.5 Evaluation of the Internet in everyday life: contradictions and puzzles

Going beyond use and non-use, the survey examined the ways people view the Internet as part of their everyday lives and activities. Perceptions, evaluations and attitudes were measured, and the relevant findings are as follows.

Role of the Internet in everyday life: positive views and specific fears

Questions concerning the role of the Internet in various domains of everyday life were addressed to users and non-users, allowing evaluations of the Internet to be measured from more than one perspective.

Table 6-3: What do you think about the statement...? (Mean)

(5 point scale from 1='strongly disagree' to 5='strongly agree')

	Total	Internet (I)	
		Users	Non-users
The Internet is a significant technology that positively changes our lives (Q. 21)	3.72	4.07**	3.42**
The Internet is a necessary tool for people's everyday lives (Q.22)	3.36	3.69**	3.07**
The Internet is a danger for the security of users in terms of online fraud and violation of privacy (Q.26)	3.89	3.68**	4.08**
The Internet is a danger for our personal relationships with other people and our social life (Q.27)	3.37	3.03**	3.68**
The Internet is a technology that might replace the individual worker in the workplace (Q.28)	2.99	2.86**	3.12**
The Internet is a technology that might jeopardise the moral values and traditions of society (Q.29)	3.35	2.96**	3.70**

Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use
 Q.21: t = 10.502, df= 970; Q.22: t = 8.894, df= 958; Q.26: t = -6.247, df= 947; Q.27: t = -8.820, df= 942; Q.28: t = -3.237, df=896; Q.29: t = -9.773, df= 947. Sig. (2-tailed): **significant at p<0.01

Most Greeks (66.1%) think the Internet has a significant role that positively changes their lives, while half (50.3%) think the Internet is necessary in everyday life. On the other hand, the big majority of people (70.3%) think the Internet is a danger for the security of users in terms of online fraud and violation of privacy, while half of Greeks (51.5%) think the Internet is a danger for their relationships with other people and their social life. In addition, Greek people are split between those who think that the Internet is a technology that might replace the individual worker in the workplace (37.9%) and those who think otherwise (34.1%), while half of Greeks (52.0%) think that the Internet is a technology that might jeopardise moral values and traditions. As far as the role of Internet use is concerned, Internet users are more likely to support the positive role of the Internet and its importance for people's everyday lives. Likewise, Internet users are less likely to argue that the Internet is a danger for human relationships, a risk to moral values and traditions or a technology that might replace workers in the workplace (Table 6-3).

The findings for each of these questions are now presented in more detail.

The Internet and its impact on everyday life

Internet users are significantly more likely to argue that the Internet has a positive impact on everyday life (Table 6-3), with 80.1% of Internet users and 54.9% of non-users thinking so. Users and non-users who are young, well-educated and in households without children are more likely to think that the Internet has a positive role in everyday life (see Appendix 6, Table A.6-12).

The Internet as a tool in everyday life

Likewise, Internet users are more likely to argue that the Internet is a necessary tool for people's everyday lives than non-users (Table 6-3), with 64.6% of Internet users and 38.8% of non-users thinking so.⁹¹ Internet users and non-users in households without children, as well those who are well-educated and young are more likely to agree that the Internet is a necessary tool in everyday life (see Appendix 6, Table A.6-12).

The Internet and its impact on privacy, security, work, and social values

Despite the overall positive role of the Internet in everyday life, mainly non-users but also a significant number of users think that the Internet causes specific risks in their everyday lives (Table 6-3). 65.7% of Internet users and 74.1% of non-users agree that the Internet is a security danger in terms of online fraud and violation of privacy. Also, the relative majority of Internet users (41.4%) and 59.5% of non-users agree that the Internet is a danger for people's social lives. Likewise, 37.9% of users and non-users agree that Internet technologies might replace the individual worker in the workplace,

⁹¹ There are less respondents than those supporting the positive impact of the Internet on everyday life. Although people think that the Internet has a positive influence, they do not consider it necessary for their lives.

whereas 41.6% of users and 61.1% of non-users agree that the Internet jeopardises social values and traditions. In demographic terms, the well-educated, young and people in households without children are less likely to agree that the Internet causes risks for people's privacy, security, role in the workplace, as well as for moral values and traditions (see Appendix 6, Table A.6-12).

These patterns of findings were confirmed when people were asked about the role of the Internet in sociability, with the respective figures reported below.

The Internet and sociability: negative impact particularly from a non-user perspective

Table 6-4: Role of the Internet in sociability (Mean)

(Q.23: 5 point scale from 1='very negatively' to 5='very positively')

	Total	Internet (i)	
		Users	Non-users
Think about the routine ways people interact or communicate with one another in their everyday lives... ⁹² How do you think that the Internet may affect these kinds of activities? (Q.23)	2.81	3.09**	2.57**

(i) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use.
t = 7.811, df= 947. Sig. (2-tailed): **significant at p<0.01

As indicated in the table above (Table 6-4), most Greeks think the role of the Internet in human communication is negative. Internet users are significantly more likely to think the Internet has a positive role in everyday interaction and communication (Table 6-4), with 35.1% of users and only a small minority of non-users (16.5%) thinking so. In demographic terms, male and young non-users, as well as well-educated users and non-users, and those in households without children are more likely to think that this role is positive (see Appendix 6, Table A.6-13).

The survey posed another question to users and non-users about the role of the Internet in everyday routines, capturing people's general views and confirming the views reported above.

The Internet in daily routines: major role particularly from a user perspective

Table 6-5: Role of the Internet in daily routines (Mean)

(Q.24: 4 point scale from 1='no role at all' to 4='a major role')

	Total	Internet (i)	
		Users	Non-users
Overall, how much of a role does the Internet play in the way people go about their daily routines and activities? (Q.24)	3.06	3.26**	2.88**

(i) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use.
t = 7.326, df= 952. Sig. (2-tailed): **significant at p<0.01

⁹² ... 'like keeping in touch with friends and family, or sending greetings, cards or invitations...'

The large majority of Greeks (78.3%) think the Internet plays a relatively major or a major role in the ways people go about their daily routines and activities. Users are significantly more likely to think that the Internet plays a more or less major role (Table 6-5), with 86.9% of users and 68.2% of non-users thinking so. Male, young and well-off non-users, as well as Internet users and non-users in households without children and those with a high education are more likely to think the Internet's role in the ways people go about their daily routines is significant (Appendix 6, Table A.6-13).

Issues concerning non-users' and users' particular perceptions of the Internet's role in some aspects of everyday life and its importance are reported below.

6.3.6 *Non-users' evaluation of the Internet in everyday life: non-users not missing out*

Do non-users think they are missing out by not using the Internet?

The majority of non-users (55.0%) said they do not miss out on things because they do not use the Internet, whereas only 21.6% stated the opposite. Males, the young, well educated, those with a sufficiently high family income, and non-users in households without children are significantly more likely to think they are missing out because of non-use (see Appendix 6, Table A.6-14). Also, familiarity with computer technologies and services matters as PC users are more likely (39.3%) than non-users (18.2%) to think that they are missing out by not using the Internet (significant at $p < 0.01$).

Hence, it becomes obvious that the majority of non-users consciously decide not to use the Internet, without being particularly concerned about the related disadvantages. On the other hand, it is interesting to see the extent to which and the areas where Internet users integrate the Internet into their everyday lives. The findings on this issue are reported next.

6.3.7 *Users' evaluation of the Internet in everyday life: would non-use influence daily routines negatively?*

How do users perceive the influence non-use would have on their everyday lives?

Table 6-6: Future non-use and influence from a user standpoint

(Q.25: 4 point scale from 1='not at all' to 4='a lot')

	Mean	%			
		Not at all	A little	Some	A lot
If you couldn't use the Internet at all in any phase of your life, how much would this affect your daily routines and activities? (Q.25)	2.63	17.8	25.6	30.6	24.9

Base: N=445 (Internet users)

Although most users (55.5%) think that deprivation of use would have some or a lot of influence on their lives, a significant number (43.4%) think that a lack of access to and use of the Internet would not influence their lives significantly (Table 6-6). Differentiations between groups of different education, income and household status emerge (see Appendix 6, Table A.6-13).

Overall, users and non-users have different experiences with Internet technologies. However, significant numbers in both groups espouse the general positive role of the Internet in everyday life, whereas both groups put forward concerns about security, privacy, sociability and moral risks that the Internet brings about. The views on moral risks in particular confirm what the literature argues with respect to the traditional culture dominating Greek society. On the other hand, Internet users are more likely to think the Internet has a major role in daily routines and activities, as well as a positive role in daily interactions and communication. Thus, although the Greeks think the Internet plays a role in everyday life, they are particularly concerned about risks in specific domains of life such as security, privacy, work, and social traditions and values. In addition, discrepancies between the attitudes of users and non-users, as well as between people of a different education or household status emerge.

These findings are explored further in Chapter 7 where the factors underlying these attitudes of users and non-users are identified.

6.3.8 Internet policy and regulation: EU policy and regulation evaluated more positively

After exploring how the Internet is related to and positioned in people's everyday lives, the survey posed questions concerning policy and regulation, and users' and non-users' level of related awareness and satisfaction.

Table 6-7: Evaluation of Internet laws & policies (Mean)
(5 point scale 1='strongly disagree' to 5='strongly agree')

	TOTAL	Internet (i)	
		Users	Non-users
The national laws and policies on the Internet can cope with security risks on the Internet (Q.35)	2.66	2.57*	2.75*
The national laws and policies on the Internet can cope with privacy risks on the Internet (Q.36)	2.79	2.73*	2.84*
EU laws and policies on the Internet can cope with security risks on the Internet (Q.37)	3.08	3.14*	3.03*
EU laws and policies on the Internet can cope with privacy risks on the Internet (Q.38)	3.14	3.20*	3.07*

(i) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use
Q.35: t = -2.140, df= 612; Q.36: t = -2.223, df= 624; Q.37: t = 2.187, df= 569; Q.38: t = 2.470, df= 569. Sig. (2-tailed): *significant at p<0.05

EU policies and laws are viewed as more effective in protecting users from privacy (24.0%) and security (23.1%) risks online than national policies and regulations (14.6% and 18.2%, respectively). However, most respondents chose the alternative 'Don't know/Refused to answer', showing that people in Greece are either unaware of issues concerning Internet policy and regulation or uncomfortable when asked such questions. Also, Internet users are more likely to view EU laws and policies as effective, whereas non-users are more likely to view national regulations and policies as effective (Table 6-7).⁹³ In demographic terms, more educated and better-off non-users are less likely to think that national or EU laws and policies can cope with security and privacy risks, whilst younger users and non-users are more likely to think so (Appendix 6, Table A.6-15).

Beyond these general remarks on Internet policy and regulation, the survey addressed more specific questions about policy and regulation to Internet users only, as users can report how policy and regulation responds to matters occurring during Internet usage.

6.3.9 Users' evaluation of Internet policy and regulation and awareness of Internet authorities

Questions concerning satisfaction with Internet policy and regulation and awareness of Internet authorities were addressed to Internet users and produced the following results.

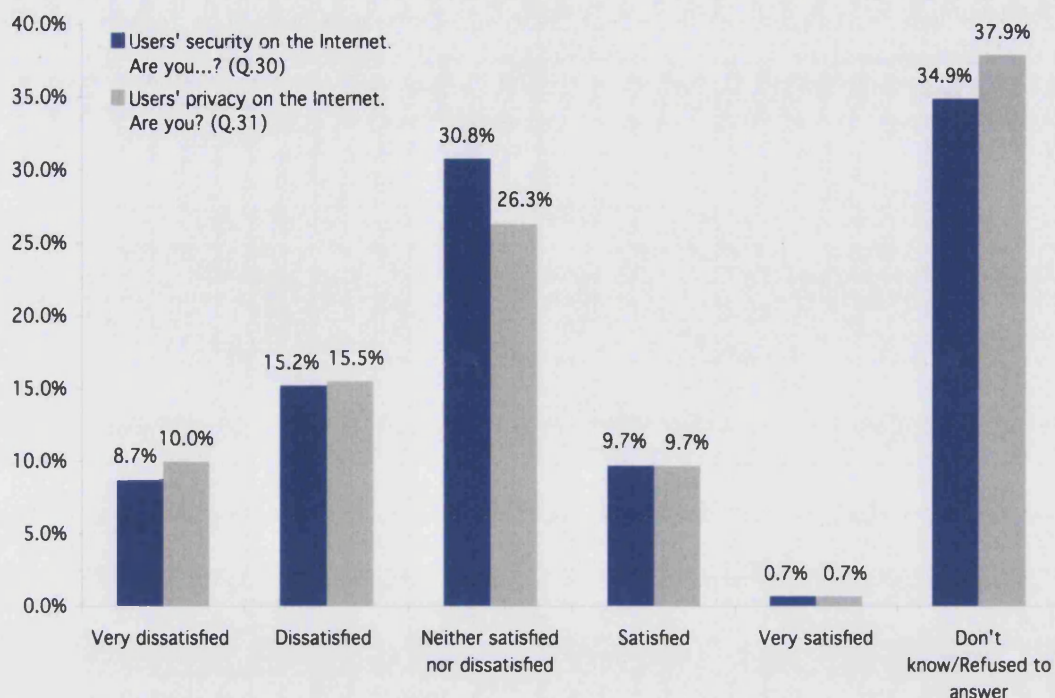
Low satisfaction with national policy and regulation on the Internet⁹⁴

How satisfied are users with Internet policy and laws in the country?

⁹³ Users are more likely to disagree that national laws and policies can cope with security (34.8%) and privacy (30.5%) risks than non-users (22.4% and 22.0%, respectively). Significantly more users (28.0%) think that EU Internet laws and policies can cope with security risks and slightly more (29.2%) think that EU regulations and policies can cope with privacy risks than non-users (19.1% and 24.0%, respectively).

⁹⁴ The level of satisfaction with security and privacy protection is based on the areas of action that authorities in the field are to be involved in.

Figure 6-6: How do you feel about the way the policies and laws in the country protect...



Base: N=445 (Internet users)

More than one-third of Internet users refused to evaluate policy and regulation on Internet security and privacy.⁹⁵ On the other hand, only 10.4% of users were either satisfied or very satisfied with Greek policy and regulation on Internet security and privacy. Thus, over 60% of users either did not evaluate or they evaluated Greek policies and laws as poor and non-satisfactory (Figure 6-6). In demographic terms, demographics do not play an important role in users' levels of satisfaction (see Appendix 6, Table A.6-16).

These results are analysed more deeply in Chapter 7 where the forces underlying the low degree of users' satisfaction and the ways this can be interpreted (i.e. dissatisfaction, lack of awareness etc) are examined further.

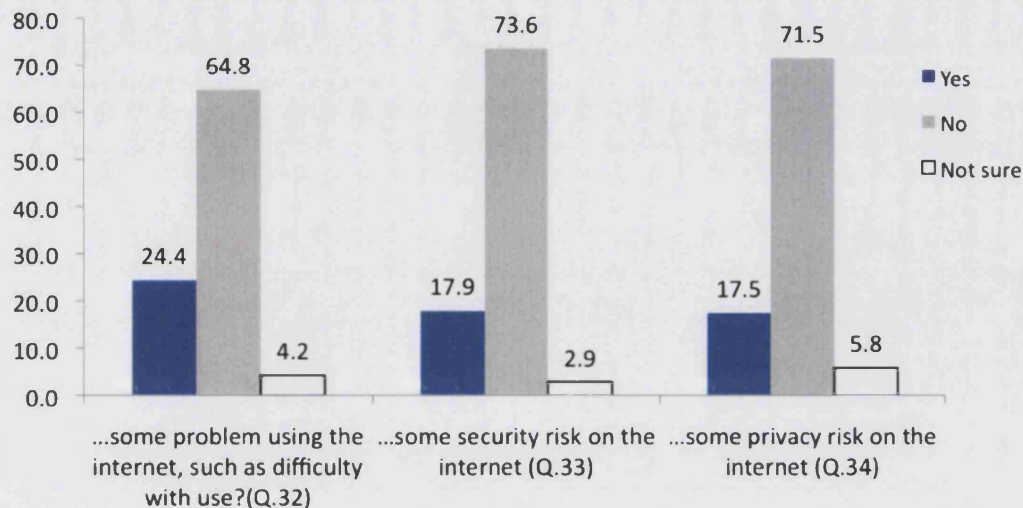
Lack of awareness of Internet authorities⁹⁶

How aware are Internet users of authorities to which they can address issues of difficulty with Internet use and security or privacy risks online?

⁹⁵ The high percentage of 'Don't know/Refused to answer' (34.9% and 37.9% for Q.30 and Q.31, respectively) can be interpreted as non-awareness or a deficit of understanding of what the role of Internet policy and regulation is.

⁹⁶ The indicator of 'awareness' is not captured easily through quantitative measures. In order to decide upon the measures of awareness factors, I drew on surveys outside of Greece due to the lack of national studies that provide such information.

Figure 6-7: Do you know which authority to contact if you face... (%)



Base: N=445 (Internet users)

As shown in the above figure (Figure 6-7), the majority (64.8%) of users are not aware of authorities which they can contact if they face difficulties with use, even more (73.6%) do not know where to address security risks online and 71.5% are unaware of authorities to contact regarding privacy risks online. The more educated the users the more likely they are to know who to contact if they face difficulties with use or security. Likewise, the more well-off users are the more likely they are to know who to contact if they face privacy risks or use difficulties. Finally, male users are more likely to be aware of which authorities to contact regarding security problems (see Appendix 6, Table A.6-17).

However, the survey provided some more specific insights into users' awareness, asking users to refer to the specific authorities they are aware of.

Which authorities?

When testing users' awareness, those who claimed they are aware of where to address difficulties concerning use, security or privacy risks were asked to name some authorities.

For difficulties regarding use, users referred to a wide range of authorities, of which not all deal closely with issues of Internet use. Industry and ISPs were the bodies that most Internet users would contact concerning use difficulties. Regarding security risks, users narrowed down the previously broad list of authorities and mentioned bodies that specialise in the provision of security support. As regards privacy problems, users mainly mentioned the same bodies as for security risks, namely bodies that provide assistance with security and crime online, thus showing that users understood privacy as closely linked to security.

Beyond the above indicators of satisfaction with Internet policy and regulation and awareness of Internet authorities, the survey posed questions to Internet users and non-users which link Internet policy and regulation directly to what people think about their needs in relation to the Internet. Thus, the survey explored the degree to which policy and regulation respond to people's needs. The results are reported below.

6.3.10 Perceived accountability of Internet authorities: EU authorities more accountable than national authorities

The survey explored people's evaluations of the social accountability of policy and regulation authorities on the Internet, thus attempting to bridge the everyday and political issues addressed so far. The indicator of social accountability was examined from a user and non-user perspective, and Table 6-8 presents the relevant results.

Table 6-8: What do you think about the statement...? (Mean)
(5-point scale from 1='strongly disagree' to 5='strongly agree')

	TOTAL	Internet (I)	
		Users	Non-users
National regulatory and policy authorities on the Internet don't take into account the citizen's voice on the Internet (Q.39)	3.19	3.25	3.13
EU regulatory and policy authorities on the Internet don't take into account the citizen's voice on the Internet (Q.40)	3.08	2.98	3.19

(i) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use
Q.39: t = 1.374, df= 575; Q.40: t = -1.334, df= 527. Sign. (2-tailed): non-significant at p<0.05

Only a small number of Greeks⁹⁷ think that policy and regulatory authorities for the Internet take the citizen's voice into account, while the numbers for 'Don't know/Refused to answer'⁹⁸ show that people are either unaware of or uncomfortable when asked such questions. Likewise, only a small number of Greeks disagree that national and EU authorities do not take into account the citizen's voice on the Internet, with users being slightly more positive about authorities' accountability (Table 6-8).

More specifically, more Internet users than non-users in the sample think that EU regulatory and policy authorities are more socially accountable than the national authorities: 30.3% of users and 20.6% of non-users agree that national authorities do not take the citizen's voice on the Internet into account, whereas 19.3% of users and 11.0% of non-users do not agree that EU authorities do not take the citizen's voice into account. Nevertheless, this is not a statistically significant difference, as noted in the above table (Table 6-8), whereas the large number of people who did not answer these questions (almost half the respondents) questions the reliability of the results and

⁹⁷ 14.7% for EU and 15.4% for national regulation and policy authorities.

⁹⁸ Over 40% of the respondents refused to give an answer.

significance conclusions. In demographic terms, young and well-off users and non-users are more likely to think that national and/or EU authorities take the citizen's voice into account, whereas education influences non-users' opinions about national and EU authorities' accountability (see Appendix 6, Table A.6-18).

In conclusion, Internet users in the sample have more positive views of Internet authorities' accountability than non-users, with EU authorities being evaluated more positively than Greek authorities. Nevertheless, the very low response rate raises issues regarding people's awareness of and willingness to answer such questions. Thus, although no significant difference between users and non-users for the whole population was concluded in this instance, this finding may be questioned for its reliability.

6.3.II Awareness of Internet policies, laws and authorities: low awareness, with users being more aware than non-users

Finally, questions of awareness were posed to both users and non-users so as to identify the possible convergence or divergence of awareness between users and non-users. The questions covered different aspects of awareness, however all aspects related to Internet policy and regulation. The main results are presented below.

Only a small number of Greeks (14.7%) disagree with the statement that people's awareness of laws and policies in the Internet is low. Likewise, only a minority of Greeks (23.6%) have heard of Greek authorities monitoring the application of laws and policies on the protection of Internet users, while even the majority of users (63.2%) are unaware of such authorities (see Appendix 6, Table A.6-20). On the other hand, most Greeks chose the alternative 'Don't know/Refused to answer'⁹⁹ in both instances of awareness (laws/policies and authorities), showing that people in Greece are either unaware of or uncomfortable when asked such questions.

Internet users are less likely to think that people's awareness of Internet laws and policies is low (see Appendix 6, Table A.6-19) and more likely to have heard of authorities monitoring initiatives for the protection of users (see Appendix 6, Table A.6-20). In demographic terms, young users and non-users are less likely to think that people's awareness of Internet laws and policies is low (see Appendix 6, Table A.6-19), while the more educated users and non-users are the more aware they are of authorities monitoring the application of laws and policies for users' protection (see Appendix 6, Table A.6-20).

⁹⁹ 47.2% of the respondents refused to give an answer.

Hence, Internet usage seems to positively influence awareness of Internet policies, regulations and authorities, although awareness is relatively low for both users and non-users.

6.4 Conclusion and advanced analysis to follow

In summary, these key survey findings were reported in this chapter:

1. Internet adoption and issues of concern

- a. Access is insufficient parameter to explain non-adoption of the Internet in Greece, as 15.1% of Internet non-users reside in connected households.
- b. Although Internet users in Greece are frequent users, the majority are involved in a limited range of online activities, are dial-up users, do not use the Internet in public spaces and consist of only a small number of new users.
- c. The majority of users in Greece are digitally constrained: insufficient awareness of online risks, lack of confidence and skills in averting online risks, as well as inadequate self-protection during use are some of the constraints. Thus, more awareness and training is needed to achieve increased Internet literacy levels in the country.
- d. 'A dismissive culture' is dominant in Greece, with non-users being non-interested in and having no need to use the Internet, and with the majority of them being highly unlikely to start using the Internet in the future.

2. Role of the Internet in everyday life

- a. People in Greece have generally positive views of the Internet, but express concerns about its role in specific areas of social life and activity such as security, privacy, work, social relations, as well as social values and traditions.
- b. Users evaluate the Internet's role in everyday life more positively than non-users, with the majority of non-users arguing that they do not miss out on things because of non-usage. Nevertheless, slightly less than half the users think that possible non-use of the Internet in the future would not affect their lives significantly.

3. Evaluation and awareness of Internet policy and regulation

- a. People in Greece evaluate EU Internet policy and regulation as more efficient than national policy and regulation, with users more positively assessing EU policy and regulation than non-users.

- b. People in Greece think that awareness of Internet policy and regulation is low, with users being less likely to think so.
- c. Internet users report low satisfaction with national policy and regulation on the Internet and low awareness of authorities which they can contact in case of problems with use or security and privacy risks online.

4. Evaluation and awareness of Internet authorities

- a. The majority of Greeks evaluate the social accountability of EU and national Internet authorities as low.
 - b. Users in the sample have a slightly more positive view of authorities' social accountability and particularly of EU authorities' accountability, but this finding cannot be generalised to the whole population.
 - c. The majority of users and non-users are not aware of the Greek authorities monitoring the application of policies and regulations on the protection of Internet users, with users being more likely to be aware of such authorities.
 - d. The high rate of "Don't know/Refused to answer" responses to questions concerning Internet policy, regulation and authorities shows respondents' lack of familiarity with or a sense of inconvenience when asked about such issues.
5. Demographics point to possible correlations between people's socio-economic status and Internet adoption in Greece. The demographics of age and education in particular significantly influence people's attitudes to the Internet and their perceptions of Internet policy and regulation. Also, gender and family status matter to some extent with men and those with no children in the household being more in favour of the Internet and more aware of and satisfied with related decision-making practices. Income is the weakest parameter of influence since more than 60% of Greeks refused to reveal their income. That is why income is not included in the modelling analysis in the next chapter.
6. Overall, Internet use is an indicator that influences Greeks' patterns of behaviour, perceptions, attitudes and awareness.

In order to better understand the implications of the above findings and their importance for the research into Greek digital divides, Chapter 9 reviews these findings in a comparative perspective. The aim is not to develop a comparative framework but to better understand the research contribution the survey makes and how the Greek case can be seen in comparison to different contexts. Hence, in Chapter 9 these findings are reviewed in comparison to surveys that present either Greece in a European context or other cases outside Europe, allowing the thesis to reflect on areas where Greece differs from or converges with other countries or

regions. Nevertheless, this comparative attempt does not by any means deliver an exhaustive and overarching discussion.

Finally, the findings reported in this chapter pave the way for a more advanced analysis where modelling techniques apply and specific research hypotheses are tested. This modelling analysis is presented in the next chapter, allowing the articulation of specific conclusions about the survey data in relation to the thesis' overall objectives.

7. Digital divides in Greece: the role of society's culture and decision-making. Modelling and hypothesis testing

7.1 **Chapter Overview**

This chapter introduces hypothesis testing and multifactor analysis of the survey data. In Section 7.2, I present the survey hypotheses and modelling techniques I employ for the data analysis. In Section 7.3, I report the findings obtained through the modelling and the conclusions reached about the respective hypotheses. In Section 7.4, I conclude with remarks on the key findings concerning Internet adoption and the two-way interaction between society's culture and Internet policy and regulation. These concluding remarks lead on to Chapter 8 where follow-up focus group interviews provide qualitative insights into the survey findings and reflect on the elite actors' discourses discussed in Chapter 5.

7.2 **Introduction: analytical strategy, hypothesis testing and modelling**

7.2.1 *Rationale and analytical strategy*

The survey findings in Chapter 6 showed that Internet users have limited Internet literacy, a low awareness of online risks and low levels of self-protection on the Internet. They also showed that, although a significant number of people in Greece and Internet users in particular have relatively positive views about the Internet in general, they negatively evaluate its role in relation to specific domains of everyday life. From a decision-making perspective, the findings pointed to the low perceived effectiveness of national laws and policies on the Internet, low awareness of Internet authorities in the country and the perceivably limited social accountability of the national authorities. On the other hand, most users are daily users and seem to trust EU Internet policy and regulation more than the respective national policy and regulation. The indicator of Internet use plays a significant role in people's attitudes and awareness as users are more positive about the Internet and relevant policies and regulations than non-users.

Whereas the practices and attitudes of users and non-users of different demographic categories were reported in Chapter 6, that chapter could not tell whether it is usage, demographics or other parameters that account for the differences in practices and attitudes of the study population. Many factors may correlate with the

outcome measures but, if those factors are themselves correlated, one could overestimate which factors really play an explanatory or causal role. Hence, multivariate modelling is needed to control for such interrelations through a partial correlation analysis. For instance, multiple regression in this chapter tests the independent contribution that each significant variable (factor or explanatory indicator) makes by controlling for the effect of other variables, while the joint effect of the independent variables in the selected model is measured to either confirm or reject the tested hypotheses.

Hence, this chapter employs advanced modelling techniques to make up for the limitations of the descriptive analysis in Chapter 6. It tests hypotheses that reflect the research questions under examination (Chapter 6, p. 152), measuring the explanatory or causal role of factors with respect to three key research indicators: Internet adoption, role of the Internet in everyday life,¹⁰⁰ and role of Internet policy and regulation.¹⁰¹ Thus, the present research enables an exploration of the dynamic relationship between these three indicators and places them in a context where a web of media, socio-economic and other forces operate.

7.2.2 Survey hypotheses and links to the preceding findings

The following hypotheses (see Chapter 4, p. 99) are tested in this chapter:

- i. Digital divides in Greece are highly associated with cultural and everyday settings of life.
- ii. Digital divides in Greece are highly associated with Internet policy and regulation.
- iii. People's culture and everyday settings of life have a two-way interaction with Internet policies and regulations, which determines digital divides.

Based on the descriptive findings reported in Chapter 6, these hypotheses are further specified with regard to the correlations tested and indicators measured:

- i) **Internet adoption**¹⁰² depends on the predictors of access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities.

¹⁰⁰ The indicator 'role of the Internet in everyday life' captures society's culture by measuring people's views on the Internet, and possible resistant and dismissive attitudes to it in the context of the everyday.

¹⁰¹ The 'role of the Internet in everyday life' and the 'role of Internet policy and regulation' were examined separately for Internet users through additional questionnaire items. This is not only because digital divides touch upon issues (i.e. quality of Internet use, self-protection online etc) that users encounter, but also because users can provide a wider web of insights into the perceived role of the Internet in everyday life and the evaluation of the efficiency of Internet policy and regulation.

¹⁰² I conceptualise Internet adoption as a series of indicators which go beyond use and touch upon quality of use as well as psychological and pragmatic parameters of adoption, such as concerns about risks and self-protection. Thus, the indicators that measure Internet adoption are: Internet use, quality of use (Internet connection, frequency of use and online activities), concerns about online risks and self-protection.

- 2) **The role of the Internet in everyday life** depends on the predictors of access to media technologies and Internet use, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities.
- 3) **The role of the Internet in users' everyday lives** depends on the predictors of patterns of use (i.e. history of use, frequency of use and type of Internet connection), breadth of online activities, awareness of online risks, concerns about and self-protection against such risks, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities.
- 4) **The role of policy and regulation** (perceived efficiency of Internet policy and regulation) depends on the predictors of Internet use and the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities.
- 5) **The role of policy and regulation** (perceived efficiency of Internet policy and regulation) **from a user perspective** depends on predictors of the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities.

7.2.3 Hypothesis testing and modelling strategy

Modelling techniques were employed to test the above hypotheses. These techniques are presented in Chapter 4 (pp. 111-2). The variables and measures that shaped the analytical process of modelling in each case are as follows:

Logistic Regression

The following dependent variables are binary and were modelled with logistic regression (for more on the rationale of logistic regression, see Chapter 4, pp. 111-2):

- Internet use.
- Type of Internet connection: dial-up or broadband (the first variable that measures 'quality of use').

Multiple Linear Regression

Multiple linear regression modelling was the modelling technique I employed mostly (for more on the rationale of multiple linear regression, see Chapter 4, p. 111). In order for this technique to be enabled some dependent variables had to be transformed. For instance, the variables of 'online risks', 'online activities' and 'security

tools' were composed of several items, and it was decided that the responses would be grouped to show, respectively, the number of online risks, number of online activities and number of security tools employed by users. For example, if a respondent used the Internet to 'send or read emails' and to 'chat with people', then the number of online activities was set at 2.

The dependent variables¹⁰³ modelled with multiple linear regression were the following:

- Frequency of use and online activities (the second and third variables that measure 'quality of use', respectively).
- Concerns and self-protection (concerns about online risks and use of security tools).
- Evaluation of the role of the Internet in everyday life (non-users).
- Evaluation of the role of the Internet in everyday life (users).

In addition, new variables were constructed based on the responses to more than one questionnaire item. Cronbach's Alpha was the statistic used to assess the reliability of each construct (new variable). The reliability output in the table below shows, along with the value of Cronbach's alpha, the 'N of items', which is simply the number of questions that compose each construct (for a detailed list of all variables, see Table 7-2). For example, 'Evaluation of the role of the Internet in everyday life (all)' is a construct that includes 8 items (questions) and Cronbach's alpha was high (0.88), as reported in Table 7-1:

Table 7-1: Constructs and Cronbach's alpha

Constructs	Questionnaire items	Cronbach's alpha
Evaluation of Internet policy and regulation (all) [N=4]	Questions 35-38	0.92
Evaluation of Internet policy and regulation (users) [N=2]	Questions 30-31	0.84
Awareness of Internet authorities (users) [N=3]	Questions 32-34	0.75
Perceived accountability of Internet authorities [N=2]	Questions 39-40	0.81
Evaluation of the role of Internet in everyday life (all) [N=8]	Questions 21-24 & 26-29	0.88

As can be gleaned from this table, Cronbach's alpha was higher than 0.7 in all cases. This suggests that the constructs exhibit internal consistency; namely, the items within each construct appear to constitute measures of the same issues. Therefore, each construct can be treated as a single indicator in the analysis.

After constructing these new variables, the following three constructs were used as dependent variables in multiple regression models:

¹⁰³ See all the dependent and independent variables in the 'List of variables', Table 7-2.

- Evaluation of the role of the Internet in everyday life (all).
- Evaluation of Internet policy and regulation (all).
- Evaluation of Internet policy and regulations (users).

7.2.4 List of variables

The following list (Table 7-2) presents the variables used in the analysis as well as the questionnaire items that each variable consists of:

Table 7-2 List of variables

VARIABLES	QUESTIONNAIRE
Age Four dummies: Age 15-24; Age 25-39; Age 40-64; Age 65+	What is your age? (q.44)
Education Seven dummies: 1= 'none or primary' to 7= 'postgraduate training'	What is the last grade or class you completed at school? (7 levels) (q.45)
Gender (1=male; 2=female)	What is your sex? (q.43)
Children in the household? (1=yes; 2=no)	Do you have any children? (q.47)
Media availability Six dummies: 1= 'Telephone' to 6= 'Internet'	'Does your household have...?' (q.1)
Frequency of watching TV (1=several times a day to 10=not at all)	'How often do you watch television programmes on average?' (q.2)
Frequency of reading newspaper (1=several times a day to 9=don't read newspapers)	'How often do you read newspapers on average?' (q.3)
Computer use Dichotomous: 1=yes; 2=no	'Do you ever use a computer at your workplace, at school, at home, or anywhere else?' (q.4)
Internet use Dichotomous: 1=yes; 2=no	'Do you ever go online to access the Internet or World Wide Web or to send and receive email?' (q.5)
Place of use Dummies	'Where do you go online from?' (q.6)
Type of Internet connection Five dummies: 1= 'Dial-up' to 5 'Wireless'	Does the computer you use at home connect to the Internet through...?' (q.7)
Desire for broadband connection Dichotomous: 1= yes; 2= no	'Would you like to have a faster, 'broadband' connection anywhere that you use the Internet from, or isn't that something you're interested in?' (q.7.A)
History of use Four dummies: 1= 'last six months' to 4= 'more than three years ago'	'When did you first start going online?' (q.8)
Frequency of use Seven dummies: 1= 'several times a day' to 7= 'less often'	'In general, how often do you go online?' (q.9)
Online activities Dummies	'Please tell me if you ever do any of the following when you go online' (q.10)
Awareness of online risks 3-scale: 1= 'yes, have a good idea' to 3= 'never heard'	'...please tell me if you have a good idea what the term means, if you aren't really sure what it means or if you have never heard of it' (q.11)
Confidence in averting online risks 4-scale: 1= 'not at all confident' to 4= 'very confident'	'Overall, how confident are you that you can keep things like computer viruses, Internet cookies, spyware, adware, Internet phishing and spam emails off your home computer when you want to?' (q.12)

Fears about online risks Dummies	'Do you worry about any of the following when you use the Internet?' (q.13)
Usage of security tools Dummies	'Which of the following tools or technologies for your protection on the Internet have you used at least once?' (q.14)
Reasons for non-use	'What are the reasons you don't use the Internet or email?' (q.16)
Interest in future use (Non-users) Dichotomous: 1= 'yes, interested'; 2= 'no, not interested'	'Would you like to start using the Internet and email, or isn't that something you're interested in?' (q.17)
Likelihood of future use (Non-users) 4-scale: 1= 'definitely not' to 4= 'definitely'	'How likely do you think it is, if at all, that you will start using the Internet or email someday?' (q.18)
Drop-outs? (Non-users) 1= yes; 2=no	Did you ever at some point use the Internet or email, but have since stopped for some reason? (q.20)
Reasons for dropping out (Non-users) Dummies	What are the reasons you stopped using the Internet or email? (q.20.A)
Evaluation of the role of Internet in everyday life (Non-users) 5-scale: 1= 'strongly disagree' to 5= 'strongly agree'	Level of agreement with the statement: 'I'm missing out on things because I am not using the Internet and email' (q.19)
Evaluation of the role of Internet in everyday life (all) 5-point, 4-point and 3-point scale, all standardised from positive (small scale) to negative (high scale). The higher the value the more positive the scale	<ul style="list-style-type: none"> ▪ 'What do you think about the statement:... <ul style="list-style-type: none"> - The Internet is a significant technology that changes positively our lives' (q.21) - The Internet is a necessary tool for people's everyday lives' (q.22) - The Internet is a danger for the security of users in terms of online fraud and violation of privacy' (q.26) - The Internet is a danger for our personal relationships with other people and our social life' (q.27) - The Internet is a technology that might replace the individual worker in the workplace' (q.28) - The Internet is a technology that might jeopardise the moral values and traditions of a society' (q.29) ▪ 'Think about the routine ways people interact or communicate with one another in their everyday lives... How do you think that the Internet may affect these kinds of activities?' (q.23) ▪ 'Overall, how much of a role does the Internet play in the way people go about their daily routines and activities?' (q.24)
Evaluation of the role of the Internet in everyday life (Users) 4-scale: 1= 'not at all' to 4= 'a lot'	'If you couldn't use the Internet at all in any phase of your life, how much would this affect your daily routines and activities?' (q.25)
Evaluation of Internet policy and regulation (all) 5-scale: 1= 'strongly disagree' to 5= 'strongly agree' (mean score)	'What do you think about the statement: <ul style="list-style-type: none"> ...The national laws and policies on the Internet can cope with security risks on the Internet' (q.35) ...The national laws and policies on the Internet can cope with privacy risks on the Internet' (q.36) ...EU laws and policies on the Internet can cope with security risks on the

	Internet' (q.37) ...EU laws and policies on the Internet can cope with privacy risks on the Internet' (q.38)
Evaluation of Internet policy and regulation (Users) 5-scale: 1= 'very dissatisfied to 5= 'very satisfied' (mean score)	'What do you feel about the way the policies and laws in the country protect... ...users' security risk on the Internet?' (q.30) ...users' privacy risk on the Internet?' (q.31)
Awareness of Internet policy and regulation 5-scale: 1= 'strongly disagree' to 5= 'strongly agree'	What do you think about the statement: 'people's awareness of laws and policies on the Internet is low'? Do you...' (q.41)
Awareness of Internet authorities (all) Dichotomous: 1= 'heard'; 2= 'not heard'	'However, before today have you heard about Greek authorities monitoring the application of laws and policies on the protection of Internet users?' (q.42)
Awareness of Internet authorities (Users) 3-scale: 1= yes; 2= no; 3= not sure/it depends (mean score)	'Do you know which authority to contact if... ...you face some problem using the Internet, such as difficulty with use?' (q.32) ...you face some security risk on the Internet?' (q.33) ...you face some privacy risk on the Internet?' (q.34)
Perceived accountability of Internet authorities 5-scale: 1= 'strongly disagree' to 5= 'strongly agree' (mean score)	'What do you think about the statement: ...National regulatory and policy authorities on the Internet don't take the citizen's voice on the Internet into account' (q.39) ...EU regulatory and policy authorities on the Internet don't take the citizen's voice on the Internet into account' (q.40)

7.3 *Modelling findings and hypothesis testing*

This section presents the multiple and logistic regression models and the logic that supports each model, explaining the selection of predictors (independent variables) for each model when necessary. It also provides the analytical output for each model and informs about the independent influence of each predictor and the joint effect of all predictors in the model. Thus, I comment on which parts of the findings were anticipated and which were relatively surprising, reflecting on the relevant hypotheses above.

7.3.1 *Internet use*

The first survey hypothesis is that Internet adoption (i.e. Internet use, quality of use, concerns about online risks and self-protection) depends on access to media

technologies and computer use, the perceived role of the Internet in everyday life, and policy and regulatory predictors.

In order to assess the factors that influence the first indicator of Internet adoption, namely Internet use, I ran a logistic regression. The dependent variable 'Internet use' was coded with 1 if the subject was an Internet user and with 2 otherwise. The factors included in the model were selected on the grounds of the descriptive findings in Chapter 6 (e.g. role of demographics) and of what existing literature and research have shown about the drivers of Internet use (e.g. computer and Internet access, patterns of media use, such as frequency of watching TV and reading newspapers, computer use etc). Even more significantly, the survey aimed to test the role of society's culture and decision-making in Internet adoption so it included everyday life and policy factors in the model. More specifically, the factors in the model are:

- demographics: age (15-24, 25-39 and 40-64 years old);¹⁰⁴ gender; education; children in household;
- media availability (Internet);¹⁰⁵
- frequency of watching TV;
- frequency of reading newspapers;
- computer use;
- evaluation of the Internet's role in everyday life (all);¹⁰⁶
- evaluation of Internet policy and regulation (all);¹⁰⁷
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation;¹⁰⁸ and
- awareness of Internet authorities (all).¹⁰⁹

A 'backward' stepwise procedure (Backward Wald)¹¹⁰ took place 10 times to clean the model of non-significant variables. This procedure was carried out for all regressions (linear and logistic) in the analysis. This is because this procedure allows all

¹⁰⁴ The age bracket 65+ was excluded to avoid multicollinearity and was used as a reference category. If I had included all possible ages as independent variables, then the 'constant' term in the regression would be equal to the sum of the 'age' variables (because each person must fall within exactly one of the age groups).

¹⁰⁵ Computer availability was not included to avoid multicollinearity. Computer availability is highly correlated with the variables of computer use and Internet availability. The regression model measured Internet availability and computer use only as those who have Internet and use a computer definitely have a computer at home.

¹⁰⁶ A latent variable that captures respondents' views of the role of the Internet in various domains of everyday life (sociability, workplace, traditions, online fraud and privacy, daily routines, change of life etc).

¹⁰⁷ A latent variable that captures respondents' views on the effectiveness of national and EU Internet policy and regulation to encounter security and privacy risks on the Internet.

¹⁰⁸ This captures respondents' views on people's awareness of Internet policies and regulations.

¹⁰⁹ This captures respondents' awareness of Internet authorities in Greece.

¹¹⁰ This process is as follows: the regression coefficients are estimated using all the aforementioned variables as independent variables. Then, the variable with the highest *p* value (0.05 significance level) is dropped from the analysis (the 'least significant' effect on the dependent variable) and the regression is estimated once again, excluding that variable. This procedure is repeated until all the variables that are left are significant at 0.05.

selected variables to be included in the initially saturated model, while ensuring that the model still adequately fits the data after all variables that do not contribute to the model have been eliminated. If it had been decided to apply a forward stepwise approach, the earlier introduced variable could have been 'locked in' the model and it might later have turned out to be non-significant, whereas the backward procedure does not 'lock' non-significant covariates in the model. Table 7-3 presents the results of the last step (step 10) of the Backward Wald:

Table 7-3: Internet use model

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Age 15_24	-2.077	0.556	13.927	1	0.000	0.125
Age 25_39	-1.012	0.468	4.682	1	0.030	0.364
Education	-0.595	0.145	16.855	1	0.000	0.551
Gender	1.482	0.422	12.334	1	0.000	4.403
Media availability: Internet	-3.247	0.434	55.978	1	0.000	0.039
Computer use	3.595	0.548	43.046	1	0.000	36.434
Constant	-1.936	1.051	3.394	1	0.065	0.144
Chi-Square			340.264			
p value			0.000			

Base: N=1001 (Internet users & non-users)

As the table reveals, the Omnibus Chi-square test suggests the rejection of the null hypothesis that none of the included independent variables have an effect on Internet usage ($p < 0.001$). The table also shows the coefficients and p value for the null hypothesis that each individual coefficient is equal to zero. At the 0.05 level, the following variables are significant:¹¹¹

- Age 15_24 ($B = -2.077, p < 0.001$) and 25_39 ($B = -1.012, p = 0.030$). Since the age band of 65+ years old was used as a reference category, the fact these variables are significant suggests that subjects between 15 and 39 years old are significantly more likely to use the Internet than those aged over 65 years. On the other hand, people aged 40-64 are not significantly more likely to be Internet users than those 65+ years.
- Education ($B = -0.595, p < 0.001$). This implies that people with a higher education are significantly more likely to be Internet users than those with a lower education.
- Gender ($B = 1.482, p < 0.001$). This suggests that men are significantly more likely than women to be Internet users.
- Media availability: Internet ($B = -3.247, p < 0.001$). This finding implies that individuals who have Internet access at home are significantly more likely to be Internet users than those with no Internet access.

¹¹¹ In the analysis, I interpret the signs (e.g. -) in front of the values of independent variables/factors according to the direction (e.g. coding) that each variable has been given in relation to the dependent variable.

- Computer use ($B = 3.595, p < 0.001$). This finding implies that people who are computer users are significantly more likely to be Internet users than those who do not use a computer.

Thus, I found that the likelihood of being an Internet user depends on Internet access, computer use and demographics. The only demographic that does not influence Internet use is that of 'children in the household'. This finding appears to be quite surprising as in Chapter 6 I found that those in households with children are less likely to use the Internet (p. 155). The usefulness of the multivariate analysis becomes obvious at this point since it shows that it is not the presence of children per se but other demographic characteristics of the people (most probably parents, as I interviewed people aged over 15 years) who have children (e.g. older, less educated people etc) that influence their decision not to use the Internet. On the other hand, there is not enough evidence that Internet use depends directly on other media use parameters (e.g. frequency of reading papers and watching TV), the perceived role of the Internet in everyday life or policy and regulatory factors. Although these results do not confirm the hypothesis about the role of everyday life and policy and regulation in people's decisions to use the Internet, these factors are tested below for their role in other parameters of Internet adoption, such as quality of use, concerns about online risks and self-protection.

7.3.2 *Quality of use*

Besides Internet use, quality of use is another aspect of Internet adoption that was modelled to test the hypothesis that Internet adoption (i.e. Internet use, quality of use, concerns about online risks and self-protection) depends on access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors. In the analysis, quality of use was measured by the variables of frequency of use, online activities and type of Internet connection,¹¹² and each of these variables was modelled separately through a linear or logistic regression.

Frequency of use

In order to assess the factors that influence frequency of use, I ran a multiple linear regression. Frequency of use was set up as the dependent variable with lower levels representing a higher frequency of use. The independent variables are the same as for Internet use, also including Internet connection (broadband or dial-up), history of use, evaluation of the Internet's role in everyday life (users),¹¹³ evaluation of Internet

¹¹² Thus, high frequency of use, a large number of activities and broadband Internet connection suggest the high quality of Internet use.

¹¹³ Users' evaluation of the role of the Internet in everyday life is captured by measuring their perceptions of the influence of future deprivation of use on their everyday lives.

policy and regulation (users)¹¹⁴ and awareness of Internet authorities (users).¹¹⁵ My analytical strategy was to include in the initial model all possible factors the research literature regards as associated with frequency of Internet use (e.g. history of use, Internet connection, place of use, media availability, frequency of other media use, demographics etc).¹¹⁶ Also, I included variables that measure users' perceived role of the Internet in their everyday lives as well as the role of policy and regulation, thus testing the role of society's culture and decision-making in Internet adoption. Since the data on frequency of use were only available for users, this regression was limited to those who said they are Internet users.

Results of the last step (step 9) of the Backward Wald are shown in Table 7-4:

Table 7-4: Frequency of use model

Variable	B	S.E.	Beta	T	Sig.
(Constant)	3.860	0.544		7.094	0.000
Children in the household	-0.019	0.007	-0.186	-2.776	0.006
Media availability: Internet	-1.418	0.296	-0.320	-4.799	0.000
Dial-up	0.533	0.150	0.241	3.548	0.001
History of use	-0.224	0.079	-0.194	-2.848	0.005
Evaluation of the role of Internet in everyday life (users)	-0.267	0.076	-0.242	-3.531	0.001
Awareness of Internet authorities (users)	0.399	0.175	0.158	2.283	0.024
R-Squared			0.391		
F			15.299		
p value			0.000		

Base: N=445 (Internet users)

The R-Squared of the model is 0.391, implying that the independent variables explain 39.1% of the variability in frequency of use. The null hypothesis of no joint effect of the independent variables on frequency of use was rejected (F 15.299 $p < 0.001$). The variables that are significant at the 0.05 level are:

- Children in the household (B = -0.019, $p = 0.006$). This finding implies that users who have children in their household make significantly less frequent use of the Internet.
- Media availability: Internet (B = -1.418, $p < 0.001$). This finding suggests that users with Internet availability at home tend to make more frequent use of the Internet.

¹¹⁴ Users' evaluation of policy and regulation is captured by measuring their assessment of the efficiency of national policy and regulation in protecting them against security and privacy risks on the Internet.

¹¹⁵ Users' awareness of Internet authorities is a latent variable which captures users' awareness of authorities they can contact when they face difficulties with use, security risks and privacy risks online.

¹¹⁶ The model was cleared up from variables causing multicollinearity or adding nothing to the fitness of the model (i.e. operating more like constants), such as 'computer availability', 'frequency of watching TV', and 'frequency of reading newspapers'. Also, 'place of use' was excluded because it would be coded as many dummy variables. However, the number of variables included was already at the maximum suggested limit given the sample size so including extra variables could have caused inaccurate estimations of the coefficients of other variables.

- Dial-up ($B = 0.533, p = 0.001$). This finding implies that users with a dial-up Internet connection at home make significantly less frequent use than users who use broadband.
- History of use ($B = -0.224, p = 0.005$). This finding suggests that users who have used the Internet for a longer time also use the Internet significantly more frequently than users who have been using the Internet for a shorter period of time.
- Evaluation of the role of the Internet in everyday life (users) ($B = -0.267, p = 0.001$). This implies that users who have a stronger perception that not accessing the Internet would affect their daily routines tend to make significantly more frequent use of the Internet.
- Awareness of Internet authorities (users) ($B = 0.399, p = 0.024$). Given the coding of this variable, users who are aware of Internet authorities which they can contact in case of difficulty with use, security and privacy risks online are also significantly more frequent Internet users than users who lack awareness of such authorities.

Thus, I found that access to the Internet, patterns of Internet use (e.g. history and Internet connection), perceived role of the Internet in users' lives and awareness of Internet authorities influence the frequency of use. On the other hand, frequency of Internet use does not depend on computer use, users' evaluation and awareness of Internet policy and regulation, nor on the perceived accountability of Internet authorities. Also, it is important to note that the socio-demographics of age, gender and education do not influence Internet users' frequency of use, challenging, for instance, the idea that young users are more frequent users than middle and old aged people. Nevertheless, this model shows that the demographic of children in the household matters for frequency of use, showing that, even if the presence of children per se does not influence people's decisions to use the Internet, it does matter for their schedules and the time they spend online.

Online activities

A multiple linear regression was also conducted to assess the factors that affect users' online activities. The independent variables were the same as for the 'frequency of use model' above and their selection relied on the same rationale as above.¹¹⁷ The dependent variable 'online activities' was operationalised as the number of activities

¹¹⁷ The model was cleared up from variables causing multicollinearity or adding nothing to the fitness of the model (i.e. operating more like constants), such as 'computer availability', 'frequency of watching TV', and 'frequency of reading newspapers'. Also, 'place of use' was excluded because it would be coded as many dummy variables. However, the number of variables included was already at the maximum suggested limit given the sample size so including extra variables could have caused inaccurate estimations of the coefficients of other variables.

users engage when online. These could include e-mail, games, online purchases etc. Results of the last step (step 19) of the Backward Wald are presented in Table 7-5:

Table 7-5: Online activities model

Variable	B	S.E.	Beta	T	Sig.
(Constant)	2.272	.351		6.474	.000
Dial-up	-.748	.222	-.274	-3.368	.001
Evaluation of the role of the Internet in everyday life (users)	.247	.110	.183	2.249	.026
R-Squared			0.132		
F			10.577		
P value			0.000		

Base: N=445 (Internet users)

The R-Squared of this model is 0.132, implying that variability in the type of Internet connection and in the evaluation of the role of Internet in everyday life accounts for 13.2% of the variability in the number of users' online activities. Also, the null hypothesis of no joint effect of the independent variables on the number of online activities was rejected ($F = 10.577, p < 0.001$). The variables that are significant at the 0.05 level are:

- Dial-up ($B = -0.748, p = 0.001$). This finding implies that users who use a dial-up connection to access the Internet at home tend to carry out a significantly smaller number of online activities than users who use broadband.
- Evaluation of the role of Internet in everyday life (users) ($B = 0.247, p = 0.026$). This finding suggests that users with a stronger perception that non-use of the Internet would affect their daily routines tend to engage in a significantly higher number of online activities than those with a weaker perception of the importance of Internet use in their everyday lives.¹¹⁸

These findings suggest that users with a fast Internet connection and those who perceive Internet use as important for their lives are more likely to engage in a large number of online activities. On the other hand, I failed to find evidence that computer use, Internet users' evaluation and awareness of Internet policy and regulation, their awareness of Internet authorities, and their perceived accountability of Internet authorities have a role to play in the breadth of their Internet usage. Also, socio-demographics do not have an influence at all, in this respect challenging commonsense perceptions of the role of education and age in particular.

¹¹⁸ Evaluation of the Internet in everyday life is used to predict the number of Internet activities, with the latter being an aspect of Internet adoption. The direction of causality will change when I test how users evaluate the Internet in everyday life as online activities then constitute one of the factors to include in the model. Overall, causality is multi-directional and different causality directions test different hypotheses through modelling.

Type of Internet connection

It was shown above that the type of Internet connection influences the range of online activities, raising questions about who is a dial-up or broadband user. At the same time, the type of Internet connection stands as an indicator of quality of usage in its own right. Research has shown that the type of Internet connection not only influences the range of online activities but also the quality of the experience of Internet usage, the time spent on the Internet and more or less the Internet's overall role in people's lives.

In order to assess the factors that influence the likelihood of the Internet user accessing the Internet through dial-up rather than broadband, I conducted a logistic regression. The dependent variable is dichotomous and was coded with 1 if the user had a dial-up connection and 0 otherwise. As regards the independent variables, I included factors which are broadly considered to influence the type of Internet connection available in the household (e.g. demographics, media availability, frequency and history of use etc). Although income is considered, in general, a factor that influences the affordability of broadband, it was not included in the analysis. Income was the weakest demographic as more than 60% of the respondents declined to reveal their income. On the other hand, the indicator of online activities was included under the hypothesis that those who engage in more activities are inclined to obtain a faster and more efficient Internet connection. Above, I found that broadband might, in turn, drive people to engage in a wider range of activities. Lastly, I included factors concerning the perceived role of the Internet in everyday life as well as policy and regulatory indicators, thus testing the role of society's culture and decision-making in Internet adoption. The independent variables are the following:¹¹⁹

- demographics: age, education, gender, children in the household;
- computer use;
- history of use;
- frequency of use;
- online activities;
- evaluation of the role of the Internet in everyday life (all);
- evaluation of the role of the Internet in everyday life (users);
- evaluation of Internet policy and regulation (all);
- evaluation of Internet policy and regulation (users);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation;

¹¹⁹ 'Place of use' was excluded because it had to be coded as many dummy variables. However, the number of variables included was already at the maximum limit given the sample size so including the extra variables for 'places of use' might have caused inaccurate estimations of the coefficients of other variables.

- awareness of Internet authorities (all); and
- awareness of Internet authorities (users).

After 18 reiterations, the model (Table 7-6) below was selected as the best fit of the data:

Table 7-6: Dial-up model

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)
Frequency of use	0.589	0.179	10.810	1	0.001	1.801
Online activities	-0.483	0.155	9.682	1	0.002	0.617
Constant	-0.158	0.565	0.078	1	0.779	0.854
Chi-Square				28.922		
P value				0.000		

Base: N=445 (Internet users)

As the table shows, the Omnibus Chi-square test rejects the null hypothesis that none of the included independent variables has an effect on dial-up connection ($p < 0.001$). At the 0.05 level, the following variables are significant:

- Frequency of use ($B = 0.589, p = 0.001$). Given the coding of this variable, this finding implies that users who make more frequent use of the Internet are significantly less likely to have a dial-up connection.
- Online activities ($B = -0.483, p = 0.002$). This finding suggests that users who carry out a greater number of online activities are significantly less likely to have a dial-up connection.

None of the other independent variables has a significant effect at the 0.05 level on the likelihood of having a dial-up connection.

Overall, the above three models I ran for different aspects of quality of use tested the first survey hypothesis that Internet adoption (i.e. Internet use, quality of use, concerns about online risks and self-protection) depends on access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors. I found some support for the hypothesis that quality of use is affected by users' evaluations of the role of Internet in everyday life. On the other hand, the existence of children in the household, the availability of the Internet at home and awareness of Internet authorities play some role in frequency of use only. Also, the various parameters of quality of Internet use, such as frequency of use, online activities and type of Internet connection, appear to be interlinked, with the number of online activities being influenced by the existence of dial-up connection at home and with the latter being influenced by the frequency of use and number of online activities. However, I failed to find support for the hypothesis that quality of use depends on computer use, evaluation and awareness of Internet policy and regulation, as well as the perceived accountability of Internet authorities. Also, it is

important to note that the above models show that socio-demographics such as age, gender and education do not influence users' quality of use (i.e. frequency of use, online activities and type of Internet connection), contrasting popular research arguments in support of the role of demographic differences or inequalities as a major source of digital divides.

7.3.3 *Online risks and self-protection*

Beyond use and quality of use, users' concerns about online risks and self-protection are two more indicators that measure Internet adoption. Apart from the split between users and non-users and the differences in quality of use (e.g. more or less frequent users, more or less skilled users etc), users' attitudes to online risks significantly influence psychological and pragmatic parameters of Internet adoption. A multiple linear regression was conducted to test the factors that influence the dependent variables of 'concerns about online risks' and 'usage of security tools'.

Concerns about online risks

To test the first hypothesis that Internet adoption (i.e. Internet use, quality of use, concerns about online risks and self-protection) depends on access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors, I operationalised the dependent variable 'concerns about online risks' as the number of risks that users are concerned about. Concerns might involve attacks by computer viruses, Internet cookies, spyware etc, and the following independent variables were included in the model:

- demographics: age, education, gender, children in the household;
- media availability (Internet);¹²⁰
- computer use;
- awareness of online risks;
- confidence in averting online risks;
- usage of security tools;
- evaluation of the role of the Internet in everyday life (all);
- evaluation of the role of the Internet in everyday life (users);
- evaluation of Internet policy and regulation (all);
- evaluation of Internet policy and regulation (users);
- perceived accountability of Internet authorities;¹²¹

¹²⁰ Computer availability was not included to avoid multicollinearity. For more, see the same case in footnote 28.

¹²¹ This is a latent variable that measures respondents' perceptions of the social accountability of national and EU authorities on the Internet.

- awareness of Internet policy and regulation;
- awareness of Internet authorities (all); and
- awareness of Internet authorities (users).

These independent variables were selected to measure how various indicators of Internet expertise or literacy (e.g. awareness of online risks, confidence in averting risks and usage of security tools), as well as more general media and other indicators (e.g. media availability, demographics and computer use) influence people's concerns about online risks. In addition, everyday life and policy and regulatory factors were included to test the role of society's culture and decision-making in Internet adoption.

After 18 iterations of dropping insignificant variables, the results are as follows (Table 7-7):

Table 7-7: Concerns about online risks model

Variable	B	S.E.	Beta	t	Sig.
(Constant)	1.735	0.285		6.082	0.000
Confidence in averting online risks	-0.253	0.115	-0.184	-2.196	0.030
Usage of security tools	0.265	0.068	0.327	3.898	0.000
R-Squared			0.113		
F			8.472		
P value			0.000		

Base: N=445 (Internet users)

The R-Squared of the model is 0.113, implying that the variability in the indicators of confidence in averting online risks and usage of security tools accounts for 11.3% of the variability in online risks users are concerned about. Also, the null hypothesis of no joint effect of the independent variables on concerns about online risk was rejected ($F = 8.472, p < 0.001$). The variables significant at the 0.05 level are:

- Confidence in averting computer viruses ($B = -0.253, p = 0.030$). This finding implies that users who are more confident that they can avert computer viruses and other online risks are more likely to have a smaller number of concerns about risks.
- Usage of security tools ($B = 0.265, p < 0.001$). This finding suggests that users who employ a larger number of security tools tend to have a larger number of concerns about online risks.

Demographics do not matter, meaning that whether users are young, well-educated and men or women do not significantly influence the extent to which they are concerned about online risks. Also, surprisingly, awareness of risks does not necessarily change users' feelings about specific risks. Interestingly, the awareness and evaluation of relevant policy and regulation are similarly not significant for the extent to which users feel safe online and protected enough. On the other hand, two different and at the same time overlapping factors determine users' concerns: on one hand, the

security practices and tools they employ; on the other, the confidence they demonstrate which is often affected by the security tools they put in effect.

Usage of security tools

Likewise, to test the hypothesis that Internet adoption (i.e. Internet use, quality of use, concerns about online risks and self-protection) depends on access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors, I operationalised the dependent variable 'usage of security tools' (self-protection) as the number of security tools that Internet users employ. These tools might include antivirus software, firewalls, spyware removers etc and they were tested on the basis of the following independent variables:

- demographics: age, education, gender, children in the household;
- media availability (Internet);¹²²
- computer use;
- awareness of online risks;
- confidence in averting online risks;
- concerns about online risks;
- evaluation of the role of the Internet in everyday life (all);
- evaluation of the role of the Internet in everyday life (users);
- evaluation of Internet policy and regulation (all);
- evaluation of Internet policy and regulation (users);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation;
- awareness of Internet authorities (all); and
- awareness of Internet authorities (users).

These independent variables were selected to measure how awareness and psychological parameters (e.g. concerns about online risks and confidence in averting risks), along with more general media and other indicators (e.g. media availability, demographics and computer use) influence people's self-protection. Also, everyday life and policy and regulatory factors were included in the model to test the role of society's culture and decision-making in Internet adoption.

After dropping independent variables in 16 reiterations, the results are as follows (Table 7-8):

¹²² Computer availability was not included to avoid multicollinearity. For more, see the same case in footnote 28.

Table 7-8: Usage of security tools model

Variable	B	S.E.	Beta	t	Sig.
(Constant)	4.269	0.536		7.963	0.000
Awareness of online risks	-0.156	0.037	-0.331	-4.224	0.000
Concerns about online risks	0.235	0.094	0.190	2.503	0.014
Awareness of Internet authorities (all)	-0.685	0.242	-0.219	-2.825	0.005
R-Squared				0.268	
F				16.153	
P value				0.000	

Base: N=445 (Internet users)

The R-Squared of this model is 0.268, implying that the variability in the independent variables accounts for 26.8% of the variability in the number of security tools used by users. Also, the null hypothesis of no joint effect of the independent variables on the number of security tools used was rejected ($F = 16.153, p < 0.001$). The variables significant at the 0.05 level are:

- Awareness of online risks ($B = -0.156, p < 0.001$). This finding implies that users who are aware of a larger number of online risks tend to make use of a significantly smaller number of security tools than those who are aware of a smaller number of online risks.
- Concerns about online risks ($B = 0.235, p = 0.014$). This finding suggests that users who have a greater number of concerns tend to use a significantly greater number of security tools than those with a smaller number of concerns about online risks.
- Awareness of Internet authorities (all) ($B = -0.685, p = 0.005$). Given the coding of this variable, this finding implies that users who have heard of Greek authorities that monitor the application of laws and policies on the protection of Internet users tend to use a significantly higher number of security tools than those who have not heard of such authorities.

Hence, there is some support for the hypothesis that self-protection is influenced by policy factors such as awareness of Internet authorities. Also, the level of awareness of online risks matters, with those who are more aware of risks using fewer security tools. Concerns about online risks and self-protection appear interlinked, with users who use more tools being more concerned about risks and those who have a greater concern about risks using a greater number of security tools.

Also taking into consideration the above results for concerns about online risks, it is obvious that there is no evidence to support the hypothesis that access to media technologies, such as the Internet, computer use, users' evaluation of the role of the Internet in everyday life and the policy indicators of evaluation and awareness of Internet policy and regulation and perceived accountability of Internet authorities, influence users' concerns about online risks or their decision to use security tools (self-

protection). Socio-demographics like age, gender and education do not influence users' level of concern and self-protection, challenging assumptions about, for instance, older people's stronger fears of online risks. Also, users who are more aware of online risks are not more likely to be concerned about them, in the same way that users confident of averting online risks are not more likely to use fewer security tools for their protection, thus challenging arguments in support of the role of awareness and psychological factors in users' feelings and practices when going online.

7.3.4 *Evaluation of the role of the Internet in everyday life*

So far I have run multiple and logistic regression models for Internet adoption and its elements of Internet use, quality of use, online risks and self-protection. Each of these elements consists of one or more indicators and was tested with regard to different sets of factors. The factors included in each model were selected on the basis of the aims of the thesis and the directions of the research literature. The main finding from running the models above is that the role of the Internet in everyday life and people's awareness of Internet authorities appear to influence various parameters of Internet adoption in Greece, although not Internet use itself. On the other hand, other policy and regulatory factors, such as awareness of Internet policy and regulation and the perceived accountability of Internet authorities, do not seem to influence, at least directly, Internet adoption in Greece.

Nevertheless, Internet adoption is only one aspect of the analytical strategy in this chapter as I also tested the factors shaping the role of the Internet in everyday life as well as the role of Internet policy and regulation. As regards the Internet's role in everyday life discussed in this section, I run multiple regression models first for the total sample and then separately for users and non-users on the grounds of the particular questions addressed to each group (e.g. questions concerning non-users' evaluations of the role of the Internet; questions concerning practical issues about the Internet's role in users' lives).

Evaluation of the role of the Internet in everyday life (all)

For the total sample I tested the hypothesis that the role of the Internet in everyday life depends on access to media technologies and Internet use, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities. The dependent variable, 'evaluation of the role of the Internet in everyday life (all)', is an internally consistent construct¹²³ that provides a thorough account of how Greeks

¹²³ Questionnaire items 21-24 & 26-29). The overall score was computed so that higher values of this construct corresponded to a more 'positive' perception of the integration of the Internet into everyday life (i.e. Q.26-29 were reversed). This construct captured respondents' views on the role of the Internet

evaluate the Internet's role in more than one domain of life. In this linear regression model, I included demographics, computer availability,¹²⁴ as well as policy and regulatory indicators, whilst I tested possible differences of evaluations of the role of the Internet between computer/Internet users and non-users. These factors were selected on the basis of the hypothesis tested as well as the need to consistently account for the role of general factors such as demographics.

After dropping independent variables in 10 reiterations, the results are as follows (Table 7-9):

Table 7-9: Evaluation of the role of Internet in everyday life model

Variable	B	S.E.	Beta	T	Sig.
(Constant)	2.882	0.106		27.130	0.000
Age 15-24	-0.147	0.056	-0.144	-2.618	0.009
Age 25-39	-0.150	0.049	-0.165	-3.065	0.002
Media availability: Computer	0.118	0.051	0.115	2.329	0.020
Awareness of Internet policy and regulation	0.045	0.021	0.106	2.162	0.031
Evaluation of Internet policy and regulation (all)	0.111	0.026	0.207	4.230	0.000
R-Squared			0.084		
F			7.079		
P value			0.000		

Base: N=1001 (Internet users & non-users)

The R-Squared of this model is 0.084, suggesting that the variability in the independent variables accounts for 8.4% of the variance in Greek people's evaluation of the role of the Internet in everyday life. Also, the null hypothesis of no joint effect of the independent variables on people's evaluation of the Internet was rejected ($F = 7.079, p < 0.001$). The variables significant at the 0.05 level are:

- Age 15-24 ($B = -0.147, p = 0.009$), 24-39 ($B = -0.150, p = 0.002$). This finding implies that people under 40 years old tend to have a significantly more positive evaluation of the role of the Internet in everyday life than those over 40 years.
- Media availability: Computer ($B = 0.118, p = 0.020$). This finding implies that people with access to a computer are more likely to have more a positive evaluation of the role of the Internet in everyday life than those without computer access.
- Evaluation of Internet policy and regulation (all) ($B = 0.111, p < 0.001$). This finding implies that Greeks who argue that national and EU laws and policies can cope with security and privacy risks on the Internet also have a significantly more positive evaluation of the role of the Internet in everyday life.

in various aspects of everyday life (e.g. sociability, workplace, traditions, online fraud and privacy, daily routines and activities etc).

¹²⁴ I tested the correlation between computer and Internet availability. The best fit with no high collinearity between independent variables was the model where the variable of Internet availability was excluded.

- Awareness of Internet policy and regulation ($B = 0.045, p = 0.031$). This finding implies that individuals who think that people's awareness of laws and policies is low tend to have a significantly more positive evaluation of the role of the Internet in everyday life.

Thus, I found support for the hypothesis that people's evaluation of the role of the Internet in everyday life depends on access to media equipment (computer) and policy indicators such as evaluation and awareness of Internet policy and regulation. In addition, the demographic of age plays a significant role in people's evaluations of the role of the Internet in everyday life, whereas the existence of children in the household and education surprisingly do not influence such an evaluation. The literature usually stresses the importance of the presence of children and of the level of education (and consequent skills) for the extent to which people integrate the Internet into their lives. Likewise, these results do not support the hypothesis that Internet users are more likely than non-users to evaluate the Internet positively, nor the influence of perceived social accountability and awareness of Internet authorities on such evaluations.

Non-users' evaluation of the role of the Internet in everyday life

A multiple linear regression was also run to model non-users' evaluation of the role of the Internet in everyday life and, specifically, non-users' evaluations of Internet use. The dependent variable is an observed variable and was operationalised as the subject's response to the statement 'I'm missing out on things because I'm not using the Internet and email'. The following independent variables were included in the model:¹²⁵

- demographics: age, education, gender, children in the household;
- media availability (Internet);
- computer use;
- interest in future use;
- likelihood of future use;
- drop-outs or former users;
- evaluation of the role of the Internet in everyday life (all);
- evaluation of Internet policy and regulation (all);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation; and
- awareness of Internet authorities (all).

¹²⁵ The model was cleared up from variables which were not a good fit and caused problems of multicollinearity, such as 'computer availability' and 'awareness of Internet authorities'. Also, the 'reasons for not using the Internet' was excluded because it had to be coded as many dummy variables. The number of variables included was already at the maximum suggested limit given the sample size so including the 11 or 12 extra variables as 'reasons' could have caused inaccurate estimations of the coefficients of other variables.

Both general (e.g. demographics, media availability and computer use) and specific (e.g. interest in and likelihood of future use) factors were included in the model. Non-users' evaluation of the role of the Internet in everyday life is influenced by non-use specific as well as more general characteristics of the study population. Also, everyday life and policy factors were included in the model so as to test the role of society's culture and decision-making in non-users' assessments of the consequences of Internet non-use.

After 10 reiterations, the model that fits the data best is as follows (Table 7-10):

Table 7-10: Non-users' evaluations of the role of the Internet in everyday life model

Variable	B	S.E.	Beta	T	Sig.
(Constant)	0.857	0.966		0.887	0.376
Interest in future use	-0.535	0.257	-0.185	-2.080	0.039
Likelihood of future use	0.253	0.119	0.186	2.129	0.035
Evaluation of the role of the Internet in everyday life (all)	0.520	0.191	0.190	2.728	0.007
Evaluation of Internet policy and regulation (all)	0.199	0.100	0.141	1.998	0.047
Perceived accountability of Internet authorities	-0.398	0.171	-0.288	-2.329	0.021
Awareness of Internet policy and regulation	0.358	0.143	0.305	2.501	0.013
R-Squared			0.232		
F			8.359		
P value			0.000		

Base: N=556 (Internet non-users)

The R-Squared of the model is 0.232, implying that the variability in the independent variables accounts for 23.2% of the variability in non-users' evaluation of the role of Internet use in everyday life. Also, the null hypothesis of no joint effect of the independent variables on non-users' evaluation was rejected ($F = 8.359, p < 0.001$). The variables significant at the 0.05 level are:

- Interest in future use ($B = -0.535, p = 0.039$). Given the coding of this variable, this finding implies that non-users who are interested in future use of the Internet are more likely to think they are missing out on things because of non-usage.
- Likelihood of future use ($B = 0.253, p = 0.035$). This result suggests that non-users with a higher possibility of using the Internet in the future are less likely to think they are missing out on things because of not using the Internet.
- Evaluation of the role of the Internet in everyday life (all) ($B = 0.520, p = 0.007$). This finding implies that non-users with a positive evaluation of the role of the Internet in everyday life are more likely to think they are missing out on things because of non-usage.
- Evaluation of Internet policy and regulation (all) ($B = 0.199, p = 0.047$). This means that non-users who consider that national and EU policy and regulation can address security and privacy online risks are more likely than those who do not

evaluate Internet policy and regulation positively to think that they are missing out on things by not being users.

- Perceived accountability of Internet authorities ($B = -0.398, p = 0.021$). Given the coding of this variable, this result suggests that non-users with higher confidence that authorities take the citizen's voice on the Internet into account are more likely to think they are missing out on things by not using the Internet.
- Awareness of Internet policy and regulation ($B = 0.358, p = 0.013$). This finding implies that non-users who think that people's awareness of laws and policies is low are more likely to think they are missing out on things by not being Internet users.

Hence, non-users' perception of whether they miss out on things by being non-users is influenced by policy factors, their interest in and estimate of the possibility of future use, as well as their general evaluation of the effects of the Internet on various aspects of life. Particularly policy and regulation factors, such as awareness and evaluation of policy and regulation as well as the perceived social accountability of Internet authorities, matter significantly for non-users' perceptions of the importance of Internet use. On the other hand, younger, male or educated non-users do not evaluate the Internet and its usage differently from older, female or non-educated non-users, challenging popular discourses about the role of demographics in non-users' attitudes to and perceptions of the Internet. Likewise, Internet availability at home and computer use do not differentiate such perceptions, questioning the usual emphasis on the role of access.

Users' evaluation of the role of the Internet in everyday life

Finally, I ran a linear model that assessed the factors influencing users' evaluation of the role of the Internet in everyday life. This model aimed to confirm or reject the hypothesis that users' evaluations depend on patterns of use, breadth of online activities, awareness of online risks, concerns about and self-protection against risks, as well as policy and regulatory predictors. The dependent variable is observed and was operationalised as the response to the question 'If you couldn't use the Internet at all in any phase of your life how would this affect your daily routines and activities?' The coding of this variable was such that higher values represented a higher evaluation of the role of the Internet. The following independent variables were included in the model:¹²⁶

¹²⁶ The model was cleared up from variables causing multicollinearity, such as 'confidence in averting online risks', 'awareness of online risks' and 'usage of security tools' (self-protection). The last two variables were predictors of the hypothesis tested here so they are excluded from the report of the results. In this respect, it is useful to see how research hypotheses that rely on theory and previous results might be challenged when tested empirically.

- demographics: age, education, gender, children in the household;
- media availability (Internet);¹²⁷
- computer use;
- type of Internet connection;
- history of use;
- frequency of use;
- online activities;
- concerns about online risks;
- evaluation of the role of the Internet in everyday life (all);
- evaluation of policy and regulation (all);
- evaluation of policy and regulation (users);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation;
- awareness of Internet authorities (all); and
- awareness of Internet authorities (users).

These independent variables were included so as to take into account indicators related to patterns and breadth of Internet use (e.g. frequency, history, online activities etc) along with more general factors (e.g. demographics, media availability and computer use) in accounting for the extent to which users consider the Internet to be important for their lives. Also, everyday life and policy factors were included in the model so as to assess the role of society's culture and decision-making in non-users' evaluations of the consequences of non-use.

After 14 reiterations, the following model (Table 7-11) fits the data best:

Table 7-11: Users' evaluations of the role of Internet use in everyday life

Variable	B	S.E.	Beta	T	Sig.
(Constant)	2.531	0.447		5.661	0.000
Age 15-24	0.371	0.177	0.177	2.097	0.038
Education	0.123	0.050	0.206	2.476	0.014
Children in the household	-0.020	0.007	-0.220	-3.063	0.003
Frequency of use	-0.273	0.070	-0.301	-3.910	0.000
Online activities	0.109	0.054	0.148	1.999	0.048
Concerns about online risks	0.152	0.059	0.187	2.568	0.011
Awareness of Internet policy and regulation	-0.167	0.077	-0.158	-2.185	0.031
R-Squared			0.290		
F			8.287		
p value			0.000		

Base: N=445 (Internet users)

¹²⁷ Computer availability was not included to avoid multicollinearity. For more, see the same case in footnote 28.

The R-Squared is 0.290, implying that the variability in the independent variables accounts for 29% of the variability in users' evaluations of the importance of Internet use. The null hypothesis of no joint effect of the independent variables on users' evaluation was rejected ($F = 8.287, p < 0.001$). The variables significant at the 0.05 level are:

- Age 15-24 ($B = 0.371, p = 0.038$). This finding suggests that Internet users aged 15-24 are more likely than those aged 25+ to think that non-usage would affect their lives.
- Education ($B = 0.123, p = 0.014$). This result implies that users with a higher education are more likely to think that non-usage would affect their lives.
- Children in the household ($B = -0.020, p = 0.003$). Given the coding of this variable, this finding suggests that users with children in the household are more likely to think that non-usage would influence their lives.
- Frequency of use ($B = -0.273, p < 0.001$). This result implies that users with more frequent use of the Internet are more likely to think that non-usage would affect their lives.
- Online activities ($B = 0.109, p = 0.048$). This finding suggests that users who engage in a larger number of online activities are more likely to think that non-use would influence their lives.
- Concerns about online risks ($B = 0.152, p = 0.011$). This result implies that those who reported a larger number of concerns about online risks are more likely to think that non-usage of the Internet would affect their lives.
- Awareness of Internet policy and regulation ($B = -0.167, p = 0.031$). This result suggests that users who think that people's awareness of laws and policies on the Internet is low are less likely to think that non-use would affect their lives.

Hence, I found some support for the hypothesis that patterns of use (i.e. frequency of use), breadth of online activities, concerns about online risks and policy indicators, such as awareness of Internet policy and regulation, influence users' evaluations of the role of the Internet in everyday life. On the other hand, I did not find evidence in support of the hypothesis that the policy indicators of evaluation of Internet policy and regulation, awareness of Internet authorities and perceived accountability of Internet authorities influence users' evaluations of the role of the Internet in everyday life. Besides the tested hypothesis, demographics significantly influence users' evaluation, whereas home access to the Internet as well as the type of Internet connection do not have an influence, thus taking the debate about certain aspects of digital divides beyond issues of access and infrastructure.

7.3.5 *Evaluation of Internet policy and regulation*

The above analysis shows not only that the discussion about the Internet's role in everyday life must move beyond issues of access and infrastructure but also that awareness and evaluation of Internet policy and regulation as well as other policy indicators influence people's perceptions of the role of the Internet in everyday life. In this section, I present linear regression models for the factors that influence Greek people's evaluations of Internet policy and regulation, first for the general population and then specifically for Internet users.

Evaluation of Internet policy and regulation (all)

In order to test the factors influencing Greek people's evaluations of Internet policy and regulation, I created the dependent variable 'evaluation of Internet policy and regulation (all)' as a construct of four questions. This construct measures users' and non-users' assessment of the ability of national and EU policies and regulations to cope with privacy and security risks online. The hypothesis here is that the role of policy and regulation (perceived efficiency of Internet policy and regulation) depends on Internet use, evaluation of the role of Internet in everyday life, as well as policy predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities. The following independent variables were included in the model:¹²⁸

- demographics: age, education, gender, children in the household;
- media availability (computer and Internet);
- Internet use;
- evaluation of the role of the Internet in everyday life (all);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation; and
- awareness of Internet authorities (all).

These predictors allowed me to not only test the fitness of the model relative to the hypothesis but also to measure the role of general indicators such as demographics and media availability for both users and non-users. After 10 reiterations, the model that fits the data best is as follows (Table 7-12):

¹²⁸ 'Computer use' was not included as it was almost constant and would have caused multicollinearity.

Table 7-12: Evaluation of Internet policy and regulation model

Variable	B	S.E.	Beta	t	Sig.
(Constant)	1.361	0.323		4.209	0.000
Age 40-64	-0.233	0.084	-0.136	-2.764	0.006
Awareness of Internet policy and regulation	-0.175	0.065	-0.220	-2.691	0.007
Evaluation of the role of the Internet in everyday life (all)	0.380	0.092	0.204	4.140	0.000
Perceived accountability of Internet authorities	0.264	0.076	0.285	3.498	0.001
R-Squared			0.087		
F			9.248		
P value			0.000		

Base: N=1001 (Internet users & non-users)

The R-Squared is 0.087, suggesting that the variability in the independent variables accounts for 8.7% of the variance in Greek people's evaluations of Internet policy and regulation. Also, the null hypothesis of no joint effect of the independent variables on such evaluation was rejected ($F = 9.248, p < 0.001$). The variables significant at the 0.05 level are:

- Age 40-64 ($B = -0.233, p = 0.006$). This finding implies that people aged 40-64 are less likely than those over +65 years to think that national and EU laws and policies can cope with security and privacy risks on the Internet.
- Evaluation of the role of the Internet in everyday life (all) ($B = 0.380, p < 0.001$). This finding implies that individuals with a more positive evaluation of the role of the Internet in everyday life are more likely to think that national and EU laws and policies can cope with security and privacy risks on the Internet.
- Awareness of Internet policy and regulation ($B = -0.175, p = 0.007$). This result suggests that individuals who think that people's awareness of policy and regulation on the Internet is low are less likely to think that national and EU laws and policies can cope with security and privacy risks online.
- Perceived accountability of Internet authorities ($B = 0.264, p = 0.001$). This result suggests that people who think that Internet authorities take the citizen's voice on the Internet into account are more likely to think that national and EU laws and policies can cope with security and privacy risks online.

These results show that the perceived efficiency of national and EU policies and regulations on the Internet depends on the evaluation of the Internet's role in everyday life, as well as the perceived accountability of Internet authorities and awareness of Internet policy and regulation. Also, the demographic of age is a significant predictor of people's evaluations. On the other hand, I failed to find evidence that Internet users evaluate Internet policy and regulation more positively

than non-users, or that awareness of Internet authorities influences how people evaluate Internet policy and regulation.

Users' evaluation of Internet policy and regulation

As regards users' evaluations of Internet policy and regulation, a linear regression model tested the hypothesis that users' perceived efficiency of Internet policy and regulation depends on their evaluation of the role of the Internet in everyday life, as well as policy predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities. The dependent variable 'evaluation of Internet policy and regulation (users)' is a construct of two questions that traces users' evaluations of whether national policies and regulations actually protect them against security and privacy risks on the Internet. The following independent variables were included in the model:¹²⁹

- demographics: age, education, gender, children in the household;
- media availability (computer and Internet);
- evaluation of the role of the Internet in everyday life (all);
- evaluation of the role of the Internet in everyday life (users);
- perceived accountability of Internet authorities;
- awareness of Internet policy and regulation;
- awareness of Internet authorities (all); and
- awareness of Internet authorities (users).

These predictors allowed me to not only test the model's fitness in relation to the hypothesis but also to measure the role of general indicators such as demographics and media availability for users. After 10 reiterations, the model that fits the data best is as follows (Table 7-13):

Table 7-13: Users' evaluations of Internet policy and regulation model

Variable	B	S.E.	Beta	t	Sig.
(Constant)	2.003	0.429		4.669	0.000
Age 15-24	1.244	0.425	0.654	2.930	0.004
Age 25-39	0.936	0.425	0.526	2.204	0.029
Age 40-64	0.978	0.434	0.479	2.256	0.025
Children in the household	-0.014	0.007	-0.153	-2.128	0.035
Awareness of Internet policy and regulation	-0.119	0.068	-0.130	-1.750	0.082
R-Squared			0.091		
F			3.566		
P value			0.004		

Base: N=445 (Internet users)

¹²⁹ 'Computer use' was not included as it was almost constant and would have caused multicollinearity.

The R-Squared of this model is 0.091, suggesting that the variability in the independent variables accounts for 9.1% of the variance in users' evaluations of Internet policy and regulation. Also, the null hypothesis of no joint effect of the independent variables on users' evaluation of policy and regulation was rejected ($F = 3.566$, $p = 0.004$). The significant variables are:

- Age 15-24 ($B = 1.244$, $p = 0.004$), 25-39 ($B = 0.936$, $p = 0.029$) and 40-64 ($B = 0.978$, $p = 0.025$). This finding suggests that users under 65 years are more likely to be significantly more satisfied with the way national policy and regulation protect their online security and privacy.
- Children in the household ($B = -0.014$, $p = 0.035$). This finding implies that users who live in households with children are less likely to be satisfied with national policies and regulations on the Internet, probably because they are more worried about security and privacy risks that children may encounter online.
- Awareness of Internet policy and regulation ($B = -0.119$, $p = 0.082$). Although the p -value is higher than .05, the analysis indicates that awareness of Internet policy and regulation is still important and has some explanatory power for the model.¹³⁰ This suggests that users who think that people's awareness of laws and policies is low are less likely to be satisfied with national policies and regulations on the Internet.

Hence, I found some support for the hypothesis that users' perceived efficiency of policy and regulation on the Internet depends on policy factors such as awareness of policy and regulation. On the other hand, I failed to find evidence to support the hypothesis that the evaluation of the role of Internet in everyday life as well as other policy factors, such as perceived accountability and awareness of Internet authorities, influence users' evaluations of Internet policy and regulation. Nonetheless, the demographic of age has an influence, while the existence of children in the household seems to raise more concerns about privacy and security risks on the Internet, making users less satisfied with the ways national laws and policies address such risks.

In summary, the findings in this section suggest that the factor of Internet use does not significantly influence people's evaluations of Internet policy and regulation. On the other hand, other policy factors, mostly touching upon awareness and social accountability matters, influence people's evaluations of policy and regulation. Also, people's attitudes to the Internet in the context of everyday life influence their evaluations of policy and regulation, although not specifically users' views of how national policies and regulations address possible risks when they use the Internet.

¹³⁰ Depending on the level of confidence, the inclusion of this variable as a predictor in the model means that the study takes more risk on concluding the significance of this factor for the whole study population (i.e. an 8.2% probability, or chance, that what I found in the sample is not true for the population). However, the 'goodness of fit' is satisfactory and the overall testing of the model indicates this variable is still quite significant.

Last, some demographics (i.e. age and children in the household) seem to have an influence on people's evaluations of Internet policy and regulation, although demographics do not appear to matter overall.

7.4 Concluding remarks: Internet adoption, everyday life and decision-making

The above multivariate analysis tested all the survey hypotheses and provided the following insights for each hypothesis:

Hypothesis 1: Internet adoption (Internet use, quality of use, concerns about online risks and self-protection) depends on the predictors of access to media technologies and computer use, the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities.

The findings that partly support this hypothesis are:

- a. The decision of ordinary people to use the Internet does not depend directly on their evaluation of the role of the Internet in everyday life or on policy indicators, such as evaluation and awareness of Internet policy and regulation as well as perceived accountability and awareness of Internet authorities. On the contrary, the likelihood of being a user depends on Internet availability, computer use and demographics only.
- b. On the other hand, quality of use (e.g. frequency of use, online activities and type of Internet connection) is to some extent affected by users' evaluations of the role of the Internet in various domains of everyday life and by their awareness of Internet authorities. Computer use, evaluation and awareness of Internet policy and regulation, and perceived accountability of Internet authorities do not significantly influence the quality of Internet use. Also, the various parameters of quality of use appear to be interlinked and interdependent.
- c. Finally, parameters of Internet adoption concerning online risks and self-protection partly depend on policy factors, with computer use and users' evaluations of the role of the Internet in everyday life not influencing concerns about online risks and self-protection. Thus, self-protection is influenced by users' awareness of Internet authorities, whereas concerns about online risks depend only on the usage of security tools (self-protection) and users' confidence in averting online risks.

In summary, ordinary people's perceived role of the Internet in everyday life and their awareness of Internet authorities appear to be significant factors influencing parameters of Internet adoption in Greece, but not Internet use in itself.

Hypothesis 2: The role of the Internet in everyday life depends on the predictors of access to media technologies and Internet use, as well as Internet policy and regulation, and awareness and perceived accountability of Internet authorities.

The findings partly supporting this hypothesis are:

- a. In general, ordinary people's assessments of the Internet's role in everyday life depends on their evaluation and awareness of Internet policy and regulation. Also, the demographic of age and computer availability appear to be influential factors. On the other hand, I failed to find evidence that Internet users assess the role of the Internet more positively than non-users, or that ordinary people's awareness and perceived accountability of Internet authorities are significant for their assessment of the role of the Internet in everyday life.
- b. As regards the group of non-users in particular, although this group was not addressed through a separate hypothesis, one can confirm the role of policy factors in how this group evaluates the importance of Internet use. More specifically, non-users' awareness and evaluation of policy and regulation, as well as their perceptions of the social accountability of Internet authorities, influence the ways they evaluate Internet use. Non-users' assessment of Internet use is also influenced by their attitudes to future use and by perceived likelihood of use, as well as by their assessment of the Internet's effects on various aspects of everyday life.

Hypothesis 3: The role of the Internet in users' everyday lives depends on the predictors of patterns of use (history of use, frequency of use and type of Internet connection), breadth of online activities, awareness of online risks, concerns about and self-protection against such risks, as well as policy and regulatory predictors such as evaluation and awareness of Internet policy and regulation, and awareness and perceived accountability of Internet authorities.

The findings partly supporting this hypothesis are:

The policy factor of awareness of Internet policy and regulation, patterns of Internet use, such as frequency of use and breadth of online activities, as well as users' concerns about online risks are important for their evaluation of the role of the Internet in everyday life. On the other hand, I did not find evidence to support the hypothesis that the policy indicators of evaluation of Internet policy and regulation, awareness of Internet authorities and perceived accountability of Internet authorities influence users' evaluations of the role of the Internet in everyday life.

In summarising hypotheses 2 and 3, Greek people's' evaluations of the Internet's role in everyday life is influenced by policy factors and to some extent by

demographics and media accessibility. Although Internet use does not seem to directly influence people's evaluations of the role of the Internet in everyday life, users are influenced by other usage-related factors, evaluating the Internet more positively overall than non-users.

Hypothesis 4: The role of policy and regulation (perceived efficiency of Internet policy and regulation) depends on the predictors of Internet use and the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities.

The findings that partly support this hypothesis are:

Ordinary people's perceived efficiency of Internet policy and regulation depends on their evaluations of the role of the Internet in everyday life, as well as other policy factors such as people's perceived accountability of Internet authorities and awareness of Internet policy and regulation. Also, the demographic of age is a significant predictor of people's perceptions. On the other hand, I failed to find evidence that Internet use is a significant predictor of people's perceived efficiency of Internet policy and regulation, although I found that users in the sample evaluated Internet policy and regulation and particularly EU policy and regulation more positively than non-users.

Hypothesis 5: The role of policy and regulation (perceived efficiency of Internet policy and regulation) from a user perspective depends on the predictors of the perceived role of the Internet in everyday life, as well as policy and regulatory predictors such as awareness of Internet policy and regulation, and perceived accountability and awareness of Internet authorities.

The findings partly supporting this hypothesis are:

Users' perceived efficiency of Internet policy and regulation depends on the demographics of age and children in the household and on users' awareness of Internet policy and regulation. On the other hand, I failed to find evidence to support the hypothesis that the evaluation of the role of Internet in everyday life as well as other policy-related parameters, such as perceived accountability and awareness of Internet authorities, influence users' evaluations of Internet policy and regulation.

In summarising hypotheses 4 and 5, ordinary people's evaluations of the role of Internet policy and regulation depend to some extent on their evaluations of the role of the Internet in everyday life, as well as other policy indicators. Also, demographics and especially age are significant. On the other hand, users' perceptions of the role of policy and regulation do not depend on their evaluation of the role of the Internet in everyday life, whereas other policy indicators appear to be partly significant.

These survey findings answer, from the point of view of ordinary people, the operationalised research questions that introduced the overall survey analysis in Chapter 6 (p. 152). In summary, the survey answered these research questions as follows:

1. *Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?*

The survey found that ordinary people in Greece have positive views of the Internet, but express concerns about the role of the Internet in specific areas of social life and activity. It indicated the existence of a 'dismissive culture' in Greece, with non-users being non-interested in and having no need to use the Internet. Also, it found that non-users' perceptions about whether they miss out on things because of not being Internet users is influenced by their interest in and estimate of the possibility of future use, as well as by their general evaluation of the effects of the Internet on various domains of everyday life. Although users' decisions to use the Internet do not depend directly on how they perceive and evaluate the role of the Internet in everyday life, quality of use is affected to some extent by such an evaluation, while the various parameters of quality of use appear interlinked and interdependent.

2. *What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?*

The survey found a low level of satisfaction of Greek people with Internet policy and regulation. EU Internet policy and regulation is considered more efficient than national policy and regulation, with users in the sample being more positive regarding EU policy and regulation than non-users. Also, the majority of ordinary people perceive the social accountability of EU and national Internet authorities as low, with users having only a slightly more positive view of authorities' social accountability. In terms of awareness, the majority of users and non-users are not aware of the Greek authorities that monitor the application of policies and regulations, with users being more likely to be aware of such authorities. Although Internet use does not depend directly on policy and regulatory indicators, parameters of Internet adoption, such as frequency of use and usage of security tools, depend on awareness of Internet authorities with most users arguing about the low level of awareness of authorities which they could contact.

3. *How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?*

Although the models produced for explaining Greek people's perceptions of the role of the Internet in everyday life hold more explanatory power than those produced for explaining people's evaluations of Internet policy and regulation (see R-squared values), cultural forces in everyday life and policy factors seem to be somewhat

interwoven as they influence digital divides. On one hand, policy and regulation significantly influence ordinary people's assessments of the role and effects of the Internet in everyday life, as well as non-users' evaluations of Internet use, although not specifically their decision not to use the Internet. Also, policy indicators such as awareness of Internet policy and regulation influence users' assessment of the impact that non-use could have on their everyday lives. On the other hand, ordinary people's perceived efficiency of national and EU Internet policies and regulations is influenced by their evaluation of the role of the Internet in everyday life as well as by other policy factors such as perceived accountability of Internet authorities and awareness of Internet policy and regulation. As regards users in particular, they do not seem to shape their perceptions of the efficiency of Internet policy and regulation on the grounds of their evaluation of the Internet in everyday life (e.g. the impact that non-use could have on their everyday lives).

In the next chapter focus-group interviews with ordinary people examine these quantitative results further, aiming to contextualise, complement and cross-validate the complex web of factors that determine users' and non-users' attitudes to and practices on the Internet. Then, in Chapter 9 the quantitative patterns are discussed in comparison to other findings in published research literature and linked back to theory. Also in that chapter research limitations concerning the quantitative approach to digital divides in Greece are brought to the fore.

8. Focus groups: Qualitative exploration of the survey findings and elite actors' discourses

8.1 *Chapter Overview*

This chapter presents the third and last phase of the empirical research, focus group interviews with a sub-sample of surveyed users and non-users of the Internet. Section 8.2 reminds us of the operationalised research questions examined in this phase and the linkages to the two previous phases. Sections 8.3-8.7 discuss the main interview findings. The findings are classified by the themes the focus groups discussed, while remarking on the interview discourses wherever appropriate. Section 8.8 presents the focus groups' reflections on the survey findings and elite actors' discourses, comparing and cross-validating all the findings. This chapter concludes, in Section 8.9, with a summary of answers to the operationalised questions. It does not discuss the focus groups with respect to other research and theory in the field. Chapter 9 discusses the findings of all three research phases in light of other similar research and elaborates how these findings provide insights into key concepts and theories in the field.

8.2 *Introduction*

In this final phase of data collection, I organised focus groups with a sub-sample of surveyed Internet users and non-users to enrich and cross-validate the data obtained in the first two phases. On one hand, the focus groups complemented and qualitatively enriched the survey findings, also cross-checking the findings concerning the same issues. In this phase, I also reflected on the findings of the in-depth elite actors' interviews. One section of the focus group discussions was dedicated to the elite actors' discourses, cross-validating the insights provided in the first phase and tackling the same issues from the perspective of ordinary people (for the focus group topic guides, see Appendix 4-8; for an introduction of complementarity and cross-validation of the findings, see Chapter 4, pp. 84-5).

More specifically, the focus groups explored the following operationalised research questions (for the operationalisation of research questions, see Chapter 4, Table 4-1):

1. Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?
2. What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?

3. How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?

After Chapters 6 and 7 quantitatively explored these questions and the grounds were set by the elite actors' interviews in Chapter 5, at this point these questions were approached qualitatively from the point of view of ordinary people.¹³¹ Sections 8.3-8.7 present the topics tackled in the focus groups and the insights of ordinary people into the above questions.

8.3 Media use

The interviews began with general questions about media use and patterns of use, in particular tracing the position of computer and Internet technologies in people's lives.

8.3.1 Internet users' media use: patterns of use and attitudes to the media

As summarised in Appendix 8 (Table A.8-1), all users use one or more media types on a daily basis. Younger Internet users identified forces that make them use a wider range of media and engage in more media activities. The convergence of media was mentioned as a matter that complicates the distinction between media platforms, while different purposes of use fit in with different media types.

Patterns and purposes of media use

In the interviews with groups of users it became obvious that age results in conditions and life circumstances that matter for media usage. Young users, such as Michalis (17 years, male student) in group 2 and Petros (19 years, male, military service) in group 1 engage more with new media technologies for entertainment and communication activities and less with traditional mass media and activities related to 'seeking information':

Michalis: ...ok, I don't watch much TV and don't listen much to the radio...nor read the papers much...but yes, I use my mobile a lot, particularly for texting...emmmm...and computers for playing games, listening music, watching DVDs, chatting, surfing....for everything, in other words...(laughs).

On the other hand, old people such as Ioanna (72 years, female pensioner) in group 1 only use the Internet when they have to (professional or family reasons), whilst they exercise a narrow scope of online and offline media activities:

¹³¹ The elite actors paved the way by examining all the operationalised research questions. Then, only three questions that could provide more insights and be explored from the point of view of ordinary people were examined in the survey and focus groups. For more, see Chapter 4, Table 4-1.

...people of my age very hardly use computers and I wouldn't be using a computer either if things were different. I'm a pensioner, I'm used to spending time in front of the TV but also to reading newspapers, listening radio and I love...I really love talking on the phone. However, I was persuaded to start using the Internet when my son moved to the USA, to work as a university teacher.

The other interviewees in both users groups prioritise work activities first and information searching second, particularly when using a computer and the Internet. One indicative example is Stefanos (32 years, male), an investment analyst in group 1:

Ok, I must say that I spend most of my time at work. Because of that, TV, telephone and the computer are what I use most. You know, TV to be informed about financial news, telephone to communicate with colleagues and the Internet to check how stock markets are doing.

Media usage is associated to some degree with relaxation and non-work purposes of use, while Eirini (32 years, female accountant) and Kwnstantina (55 years, female administrator) in group 2 pointed to the distinction between media types and purposes of media use: traditional mass media are arguably used more for information and entertainment purposes, while computers and the Internet are used more for work purposes. Only those who are advanced Internet users use the Internet in multiple everyday life activities and for a wide range of purposes:

Eirini: I use TV, radio and mobile phone everyday, whereas a computer, the Internet and...these are the new technologies I'm using...they are only available at my workplace, as I don't use them at home and when I have free time.

Kwnstantina: ...I agree with Eirini. I like TV, radio and telephone more than those incomprehensible and quickly changing technologies...like computers, the Internet, and all small gadgets the names of which I can't recall now...

Finally, interviewees such as Antonios (44 years, male self-employed) in group 2 pointed to media convergence. Antonios indicated how the Internet can, at least partly, substitute and replace traditional media such as TV and radio, problematising the distinction between media platforms:

...I do not use TV or radio so much...now with my computer I mostly use DVDs and download music I like from the Internet. You see, I belong to P2P networks which allow me to share all types of visual and audio content that I like...

Attitudes to and evaluation of media

Internet users acknowledged the important role specific media types play in specific domains of daily activity, such as work, communication and entertainment.

As regards the Internet, users have different views and use the Internet for various purposes. Stefanos (32 years, male investment analyst) and Apostolos (44 years, male civil servant) in group 1 have quite different views, with the former using the Internet broadly and willingly and the latter arguing that he was forced to become a user.

Stefanos: I use a computer and the Internet for surfing and watching DVDs, but this is not frequent.

Apostolos: I'm not saying that I don't have to use computers and the Internet at work...I have to...I had to be trained for that...difficult to avoid, you see (laughs)...the rest of my time I read news and watch TV...or listen to music and other programmes I like on the radio.

Nevertheless, Internet usage is influenced by everyday and attitude factors, as shown later in the analysis.

8.3.2 Internet non-users' media use: patterns of use and attitudes to media

Internet non-users' patterns of media use are similar to users' patterns. As shown in Appendix 8 (Table A.8-2), non-users use one or more media on a daily basis. They use different types of media for different purposes, while daily routines and settings of life determine their attitudes to the media.

Patterns and purposes of media use

Three non-users (group 4) use a computer. For these non-users, computer use is highly related to work as they use a computer when they are forced to or realise that it is important at work. Regarding other media, in both groups of non-users it became obvious that different people use different media for various purposes in their daily lives. Nevertheless, media play overall a very important role in non-users' lives and are used on a daily basis.

Attitudes to and evaluation of media

Non-users have different attitudes to various media on the grounds of their routines and depending on their time schedules and hobbies. An indicative example is Maria, a 45-year-old housewife in group 3, who spends most of her time at home. Maria says she watches TV quite a lot, considering TV relaxing and 'good company':

Interviewer: Have all of you got a mobile?

Maria: No, not me (hesitation)...you see, I stay at home most of the time to bring up my children. I don't work, so don't need it....everyone can find me on the landline...besides, it's expensive for me...

Interviewer: So, do you use any other media?

Maria: Of course....my landline to contact relatives and friends from time to time, and particularly TV....it relaxes me...I'm tired at the end of the day and TV gives me the chance to rest and relax...

(a few moments of silence)

Maria: ...the TV is on most of the time...it's good company...

Those who use a wider range of media and emphasise the role of the media in daily activities are those who express a higher degree of appreciation for their contribution to the improvement of various aspects of life. On the other hand, those who use a narrow range of media, either because of life circumstances or personal choice, are less positive regarding the role of media in their everyday lives. An

indicative example is Anna (38 years, female teacher) in group 4, who demonised the role of some media, being very selective about her exposure to media messages:

Don't you think that media have over-occupied our time and lives in general? I don't know why people used to live better in the past when they were not exposed to all these media messages... The good thing is that personally I do not have to use any media for my work... thus, I can select good media programmes and the right way to use media technologies. I'm saying this because most media programmes, on TV in particular, are rubbish and provide a distorted picture of the world.

8.4 Internet use

After the common set of questions about media usage, the discussion concerning the Internet specifically moved in different directions for users and non-users. At this point, I attempted to follow-up and go deeper into the survey findings.

8.4.1 Users and the Internet: patterns of use, attitudes and role in everyday life

As summarised in Appendix 8 (Table A.8-3), only users who appreciate the role of Internet in their everyday lives and have chosen to use it willingly engage in a wide range of and advanced online activities. Internet use and the quality or breadth of usage as well as users' attitudes to the Internet appear to be closely linked with the reasons users employ the Internet to deal with personal life circumstances.

The Internet and how is understood

Users' understanding of the Internet depends on their online activities and experiences. Less advanced users have less elaborated views of the Internet than those engaging in a wider range of online activities. Indicative of the role of online experiences and activities in users' understandings are the following views in group 2:

Eirini (32 years, female accountant): ...possibly because I don't have enough knowledge...I mean, I use specific sites...for me, in any case, it's a space where I can search for stuff and information, and I can find some of the information I'm looking for...

Anastasia (27 years, female teacher): ...yes, but we all know that this is not the only way to see the Internet...for instance, I'm using chat rooms, virtual rooms where people meet, discuss, create new networks...

Pantelis (25 years, male postgraduate student): ...I'm also chatting ...also, blogging offers a lot to community-building...

Antonios (44 years, male self-employed): ...plus, you can find software to use outside the Internet.

Patterns of Internet use: links to life circumstances

Users mostly employ computers and the Internet for work purposes. Myriam (27 years, female postgraduate student) in group 1 confirmed Internet and computer

use for such purposes. She notes that media convergence is deeply rooted in the Internet, challenging rigid media distinctions:

Why do we have to distinguish? I mean...if you have a computer, you have the Internet, radio, TV, electronic newspapers, DVD...I don't know what else...

Apart from users who use the Internet willingly, Ioanna (72 years, female pensioner) and Apostolos (44 years, male civil servant) in group 1 presented Internet use not as a personal choice but as a decision imposed by family or work circumstances. This influences practical issues concerning the quality, length and breadth of usage:

Apostolos: ...I had to learn how to use computer for work; I was forced to do so...It's not something I like though and this is why I never work on the computer at home.

Ioanna:it took me a lot of time to learn the basics...emails, searching for information and using...how is it called? ...oh, yes, Skype, where we hear his [son] voice and see his face. I must admit that these are my only uses, as it's still hard for me to get used to such machines... I have agreed with my son to communicate at specific times with him and these are the only times I use my computer.

The feeling of being forced to was articulated by users who use the Internet for work and family purposes only. This goes hand-in-hand with the age of the interviewees as the middle aged and elderly, such as Kwnstantina (55 years, female administrator) in group 2, Ioanna (72 years, female pensioner) in group 1 and Apostolos (44 years, male civil servant) in group 1, use the Internet because of life circumstances (e.g. family or work changes), limiting their use to what they consider required activities. They also complained about difficulties with use, as well as a lack of understanding of and interest in the Internet. The role of age came up explicitly when users characterised mass media the 'media of my generation', implying that the Internet is for youngsters:

Kwnstantina: Look, I started using computers and the Internet very recently...because my company changed the administration system and, as an administrator, I had to learn to use computers. I have started to use such technologies now, but I'm still having difficulties and couldn't think of using them for reasons other than work!

Interviewer: Whereas you use technologies such as radio, TV, telephone...everyday?

Kwnstantina: Yes, that is what I'm used to; these are the media of my generation.

Life circumstances and instances of resistance to technology came to the fore as possible reasons why users, such as Agapi (35 years, female decorator) in group 1, feel 'forced' to use the Internet. At this point, the notion of 'choice' turns from the idea of 'no choice to use the Internet' into 'no choice not to use the Internet':¹³²

Sometimes, I'm frustrated that I cannot avoid it [the Internet]. My case is similar to and different at the same time from Ioanna's in the sense I was forced to start using the Internet not for family but for work reasons. When I first started working as a decorator I had training, knowledge, information from conferences, workshops and publications in my area... However, I

¹³² Petros (19 years, male, military service) in group 1 raised the role of life circumstances from another perspective. He explained how military service imposes restrictions on Internet activities and the time spent online.

quickly found myself lagging behind new developments... I realised that in order to survive I should get familiar with the Internet.

Life circumstances and everyday activities become particularly important if one looks at the gap of online experiences and breadth of usage between users. For instance, in group 2, Pantelis (25 years, male postgraduate student), a well-educated computer scientist, and Kwnstantina (55 years, female administrator), a woman who had to learn how to use computers in her 50s, are two users engaging in different online activities. This is because they use the Internet in different everyday frameworks, consequently articulating contrasting views about the medium and its services:

Pantelis: I'm using the Internet as a professional, dealing with Internet content and software production. As a user though, I think I'm involved in most of the activities that a user can be involved in.

Kwnstantina: Ooo...my god! This sounds too much...sorry, you are professional, ok, but how can you really develop all these activities in your spare time? Imagine that I only use the Internet in the workplace for emailing and information searching and that this takes so much time...

Interestingly, each category of users is surprised by the other side, with fanatical Internet users being critical and reserved users being defensive:

Interviewer: There are those who use it only or mostly in the workplace I think...

Agapi (35 years, female decorator, group 1): Yes, that is me! I think I do more things...I even chat via MSN (laughs). No, seriously, I communicate a lot, I exchange emails, I search a lot, I download a lot and I also create my own web space...but all this for work...

Stefanos (32 years, male investment analyst, group 1): ...hasn't that made you become more curious about and interested in the things you can find and do online?

Agapi: No, not at all!

Stefanos: Surprising...I cannot think of spending a day without checking my emails, surfing, playing games, reading online news, downloading music and films or chatting on Skype.

As for fears about Internet risks, concerns about risks and means of protection vary among users, depending on their expertise, knowledge, awareness and sense of responsibility. Eirini (32 years, female accountant) in group 2, who only uses the Internet at work and does not have knowledge or interest regarding security issues, is an indicative example of how awareness and a sense of personal responsibility determine users' concerns and self-protection:

...I have a computer at work. I don't have one at home, so I'm not responsible for security, and, honestly, I don't know much about it....emmm...I'm not sure whether there are any security tools installed on the computer I use...and I hadn't even thought about possible risks...

On the other hand, those with a wider scope of online activities are less concerned about online risks and more confident that the security tools they employ can protect them sufficiently. Words of the most advanced user in group 2 are indicative here:

Antonios (44 years, male self-employed): I use all necessary security tools, I update them very often, I add new tools as necessary and try to be always informed regarding security and sources of attack... so far, at least, I haven't been attacked by a virus and haven't got my work or equipment corrupted.

In both groups of users there were the advanced and skilled and those with limited efficacy and breadth of usage. Those with advanced skills challenged popular discourses and made specific arguments concerning online risks and security; those with a limited breadth of usage drew on 'media panics' discourses and relied on abstract references to what is 'real', implying that 'online' can be identified with 'unreal':

Eirini (32 years, female accountant, group 2): ... everyday we hear about things that happen on the Internet...no specific example comes to my mind now...if I talk about myself...why should I waste my time in front of a screen to do things that I can do in a more 'real' way?

Pantelis (25 years, male postgraduate student, group 2): ... (interrupts) You are wrong...there are certain things you do online which you cannot do otherwise, or if you do them offline then you will have to spend more money, more time, or both.

What about being deprived of the Internet in the future?

The purposes of Internet use and whether use constitutes a personal choice or a decision imposed by life circumstances determine users' views of the possibility of being deprived of the Internet in the future. Even if all users agree on the benefits of Internet usage, those using the Internet unwillingly, such as Agapi in group 1, argued they would not mind if they had to stop using it:

Stefanos (32 years, male investment analyst): Yes...I would have to change work (laughs) ...besides, not to forget my online hobbies, the information I get and the new people I meet online.

Agapi (35 years, female decorator): I must agree with Stefanos on the importance of the Internet for professions like his and mine... However, if I was deprived of the Internet in the future, I don't think it would mean anything for my life.

Those who use the Internet for work purposes only recognised that non-use in the future would influence their work and only that. In this respect, the words of Eirini (32 years, female accountant) in group 2 are indicative:

I know it sounds weird, as I use the Internet at work...but it's not personal usage, nor a choice...so, it would change my work conditions but no other aspect of my life.

Importance of Internet use for everyday life

It is obvious from the above that everyday activities and life circumstances significantly determine people's decisions to use the Internet and their online experiences. For those who say the Internet is needed for their everyday activities (e.g. work), but is not something they have willingly chosen, the Internet influences other media use as well as time schedules and rhythms of life:

Agapi (35 years, female decorator, group 1): I have less time now...less time to see a film, to watch a documentary or movie on TV, less time or no time to read magazines and papers...even less time to phone friends... I suppose, this is the price to pay for professional success, right? (laughs).

Age influences the domains of everyday life in which the Internet plays a role. Younger users appreciated the Internet with regard to non-work purposes of use, emphasising the new ways the Internet offers for communication and entertainment. On the other hand, older users, who do not use the Internet in many domains of the everyday and are not fanatical users, were quite defensive and tried to explain why they feel like that:

Myriam (27 years, female postgraduate student, group 1): I personally like it very much...especially when downloading cool stuff, as everything is free (laughs). Also, when being in touch with friends who have gone away for study or work...the Internet allows me to keep in touch ...something which would be difficult and expensive otherwise (laughs).

Petros (19 years, male military service, group 1): Yes, I agree with Myriam...when I have the chance to take a break off from camp...the Internet is a way to say: 'hello people, I'm back to life!' (laughs).

Agapi (35 years, female decorator, group 1): I suspect I'm the only one who feels like being forced...It's funny, people say that the more you don't want something the more it happens (laughs).

Ioanna (72 years, female pensioner, group 1): At least you use it for work, it's useful...besides you are educated and have time [in terms of age] to learn everything. I'm struggling and I use it for my son.

The Internet's role in users' lives is determined by the purposes of use and the reasons people use the Internet. Users in group 1 see the Internet as important mostly for work, whereas only Stefanos (32 years, male investment analyst) argued the Internet plays an important role in most of his daily activities. Stefanos' words implied a criticism of those who argued the Internet is not important in daily life, whereas Ioanna (72 years, female pensioner), the least experienced user in the group, created some distance, positioning herself outside the group:

Stefanos: It is amazing how people keep the Internet outside their lives... As soon as I started using it... I started learning, doing things and spending increasingly more time online... It has now become an integral part of my work, communication, information and...my entertainment...

Ioanna: I'm amazed! Thank you for inviting me to this meeting, as I would otherwise think that my son is the only one who considers the Internet important (laughs).

8.4.2 Non-users and the Internet: reasons for non-use, attitudes and impact on everyday life

As summarised in Appendix 8 (Table A.8-4), the notion of 'need' and how non-users prioritise things in life constitute the driving forces of non-usage and the likelihood of and desire for future usage. In this sense, indications of resistance to the Internet should be seen in an everyday life context and in association with people's values and life priorities.

The Internet and how is understood

In contrast to users, non-users did not evaluate nor characterise the Internet. They defined it on the grounds of the reasons the Internet can be used for and the

tools it provides. For instance, Ioannis (25 years, male civil engineer) in group 4 described the Internet on the basis of what users can do online:

The Internet is a huge space where people can trace information, go over a huge number of sites, play games, download music and movies, communicate with people...and many other things. Right?

Reasons for non-use and attitudes to the Internet

As regards the reasons for non-use, the concept of 'need' (lack of need) dominated most non-users' discourses. The concept of 'need' is to be seen in a rich and diverse everyday context as the interviewees talked about 'need' with reference to their individual everyday activities and particularly their work activities:

Antonia (33 years, female self-employed, group 3): It's the same for me...I work a lot, I'm self-employed and I don't need the Internet for work... I prefer to spend my time with the family, or going out.

.....

Maria (45 years, female housewife, group 3): ...because of a lack of time. I don't work outside home, but being a housewife is tough...besides, I don't see why I should use the Internet. I mean, I don't have any reason to do so. These things are for the young or those that need the Internet at work...It's not for housewives...I think....

The main reason non-users do not use the Internet is what they considered a lack of need, while in many instances they argued they did not have to learn to use it for work. Although the notion of 'need' is approached here purely on the grounds of subjectivity and in accordance with the interviewees' understanding of need in the context of their thinking and living, it surely relates to the choices non-users have in life and whether they are not subject to the 'forced use' that some users are. Nevertheless, non-users had positive views about the Internet and its growing role in people's lives, although they felt they are not in a position to fully evaluate it:

Ioannis (25 years, male civil engineer, group 4): ...in the future everyone will be expected to use the Internet. Undoubtedly, the Internet is a technology we cannot ignore as it is becoming increasingly important for most things in life. I sometimes wonder whether it's wrong that I don't use it, but it's just that I haven't had the chance in the family and school to learn how to use it.

Also, the argument of non-users that they have never had the chance to get Internet training and education made them talk about the Internet as if it is completely dissociated from their daily lives and activities. Some non-users went further, pointing to the importance of keeping the usual order of life by resisting technologies such as the Internet. The interview texts involved references to the Internet as a 'burden', as well as more practical issues of concern, such as parents' worries about the impact of the Internet on children:

Petros (39 years, male waiter, group 4): I don't see why I should put one more burden on my shoulders... I mean, these things are for young people, for children who learn at school, not for us...unless you need it at work...

.....

Anna (38 years, female teacher, group 4): I don't have the knowledge or expertise to use the Internet, but I could easily get some training so as to start using it... I don't need it and I don't want to be subject to all new technological wonders that mislead people. This is something I would like to teach my children about, but I don't think they will be in a position to resist.

Impact of non-use on everyday life

The perceived impact of non-use on everyday life differed among non-users. First, there were those who felt they did not need or did not want to use the Internet, considering that non-usage does not have an important impact on their lives: 'Ummm...not really, I don't think that my life would change if I were using the Internet...' (Maria, 45 years, female housewife, group 3). Second, some non-users are interested in the Internet and would like to use it in the future, emphasising the negative impact of non-use on people's lives: 'Why are you saying this? Even for you [Maria], I think the Internet could somehow change everyone's lives...' (Andreas, 50 years, male doctor, group 3). Last, there were those who adopted a neutral position and considered that the Internet could possibly benefit them, although they were somewhat uncertain.

The abovementioned last category of non-users expressed reservations about adopting the Internet, raising issues of awareness and fears about online risks. One indicative example is Evangelia (29 years, female shop owner) in group 4 who thinks that her work could benefit from the Internet, while pointing to her concerns about online fraud on the basis of what she 'hears' about online risks:

Although I don't know much about the Internet, I can see the benefits that Ioannis mentioned. Now that I'm thinking about my shop, on the Internet I could find more supplies and at better prices, right? ...I could also find new trends and ideas about how to renew my shop... However...I wouldn't risk going online and buying things without having someone to advise me. I'm saying this because we often hear about people who buy things and lose money by using credit cards online.

It is interesting that non-users with children considered that the impact of non-use on their lives passes through their children and their children's usage of the Internet in the future. The impact on children's lives is perceived as an integral part of parents' own lives as parents felt they should keep control of their children's activities by familiarising themselves with the Internet:

Anna (38 years, female teacher, group 4): The Internet is not important for my work and I don't need it for other activities either ...I'm quite informed and I have seen how it works and what things you can do through it, as my daughters will, unavoidably, use it at school and home.

Interest in and likelihood of future use

Regarding the likelihood of future use, non-users took into account the parameter of 'need' which they framed subjectively and in their individual contexts of life. The sense of 'need' varies from person to person on the basis of subjective evaluations and choices or life circumstances, as shown in the following dialogue in group 3:

Interviewer: ...how likely are you to use the Internet, if at all?

Antonia (33 years, female self-employed): ...If something changes dramatically in my life...you know, work....ummmm...I don't know what else....

Maria (45 years, female housewife): (interrupts) If I hadn't had all these family responsibilities...maybe....at some point I was thinking of attending Internet seminars, EU-funded seminars...that could be a benefit, some money out of trying to learn something new (laughs)...but I couldn't manage...three children...big responsibility...

Non-users who intend to use the Internet in the future or not do so in the framework of their daily activities and particularly on the grounds of their work or study activities. Thus, not only use but also likelihood of use in the future must be seen in an everyday context, pointing to possible reasons for non-use:

Andreas (50 years, male doctor, group 3): I'm intending to do so...I know I had to use it earlier, as it's very important for my work... you can find online a lot about new developments in medicine.

.....

Dimitrios: Ok, I have my studies... It's my first year at the university and I was told that I will have to start using the Internet shortly...emails...such kind of things...but I will wait until I'm asked to do so.

It is obvious that likelihood of future use goes hand-in-hand with non-users' desire for use and their attitudes to the Internet overall. Non-users with positive views of the Internet and its role as a medium of information and communication are those most likely to use it in the future. On the other hand, those with a negative opinion about or inadequate familiarity with the Internet are not likely to become users. This dialogue between non-users in group 4 is indicative:

Evangelia (29 years, female shop owner): I don't think I'm very likely to use it, not only because of the concerns I mentioned before but also because I don't have to use it and... I can anyway do my work in the way I'm used to. I cannot plan to take courses, to install a connection and to get into all this complicated process.

Ioannis (25 years, male civil engineer): I understand Evangelia's point. This is similar to my thinking. However, I've lately started to consider the possibility of using the Internet. This is mostly because the majority of my colleagues use it and have benefited a lot...

Further, non-users' desire to use the Internet in the future reflects different needs and evaluation of needs, as well as divergent understandings of the Internet and its value. The following dialogue in group 3 points to non-users' different priorities in life and consequent understandings and evaluations of the Internet:

Interviewer: ...you mean that you won't be using the Internet for anything else but for work purposes?

Andreas (50 years, male doctor): Yes, I don't have the time and things like chatting are not for me....

Interviewer: What do you mean by 'It's not for me'?

Andreas: You see, I'm a busy person, with a family and better things to do than surfing or chatting...

Dimitrios (18 years, male student): (interrupts) ...for me, chatting, playing games...you know, all these 'stupid' things could be very 'cool', they could relax me and...you know, it could be fun, a lot of fun...

Konstantinos (62 years, male plumber): ...chatting, gaming...these are for youth, not for us.

In these discourses, age becomes a barrier to future use for middle-aged and elderly, influencing their interest in and the likelihood of future use (e.g. Kwnstantinos). Also, in this dialogue contrasting views of Internet activities are articulated, depending on how non-users prioritise things in life and what they consider appropriate or not.

8.5 *Public discourses on the culture of Greek society: reflections on the elite actors' discourses*

After the general questions about Internet usage and people's evaluations of the Internet, users and non-users were asked the same set of questions about public discourses on the cultural traits of Greek society (Appendix 8, Table A.8-5). These questions aimed to provide feedback on the elite actors' discourses and to reflect on ordinary people's views of such discourses relative to what they argued earlier in the discussion.

8.5.1 *Technophobic, non-technocratic and traditional Greek society*

The interviewees problematised popular discourses that present Greek society as non-technocratic and technophobic.

The users did not dismiss but problematised the existence of technophobia in Greek society. They brought to the fore the role of 'those who decide', as well as the Greek mentality and lifestyle, which they called 'Greekness', backing public discourses that argue about the role of technophobia in the low Internet diffusion in Greece. They also pointed to the role of pragmatic factors such as the lack of education, training, information and infrastructure in Greece. The following dialogue in group 1 is indicative in this respect:

Myriam (27 years, female student): I can accept that people may be afraid of the Internet...but why? It's not just because they are stubborn...is it? I think that a lack of education and information makes them suspicious... If you don't have a computer at home, you are excluded, as my university doesn't provide students even with the basic infrastructure.

Stefanos (32 years, male investment analyst): I don't disagree with you [Myriam] but... ok, some people are unwilling or afraid and some others are not given opportunities. But this takes us back to why this is the case in our country. Ok, ordinary people are 'victims'...but those who decide...who are those people...and why? Doesn't this relate to our mentality, lifestyle and our very 'Greekness'?

Even if users partly admitted that Greek society is dismissive of new technologies and traditional in general, they emphasised the role of policy, education and other systemic conditions in people's decisions to use the Internet. Pantelis (25

years, male student) in group 2 pointed to systemic parameters as forces that, in his view, drive only a minority of Greek people to adopt the Internet:

...we shouldn't underestimate people...those who work on new technologies do really well...of course, there are not the best possible conditions and the appropriate infrastructure and policy support... How many may want to use the Internet but don't know where to start from and how to afford it...?

Issues concerning the dismissive and self-centred culture of Greek society raised, for some users, the particular link between politics and society, being in tune not only with relevant literature but also with the elite actors' arguments. Antonios (44 years, male self-employed) in group 2 said that politics is responsible for the change and improvement of society's culture and practices, while he pointed to the close bonds between the culture of society and politics in Greece:

We are not the easiest and most positive people in the world. That does not mean that politics are fine...the opposite, as politics, I think, reflect what society is...and yes, politics is responsible because it does not change society.

Also, users such as Agapi (35 years, female decorator) in group 1 challenged popular discourses about the traits of Greek society, asking why people should consider the Internet a 'must' and a 'necessity'. Agapi stated that she is in favour of more traditional ways of work and communication. She uses the Internet for work purposes only and is not a great supporter of technology in general:

I don't see why it's a bad thing not to use the Internet, especially when it's not a need. Why are we backward-looking when we want to keep our relations and work as they were in the past? Is it a bad thing to maintain traditions? ...We try so desperately to prove that we are Europeans and not lagging behind, that we are as civilised and westernised as other countries...

Kwnstantina (55 years, female teacher) in group 2 raised the notion of 'utility', trying to challenge the existence of techno-phobia in Greek society. 'Utility' seems to be, from an everyday life perspective, of critical importance for the ways users evaluate the Internet's role and relevant popular discourses:

...Why should I spend time and energy using something more than it's needed? All right, the Internet may be useful or even necessary in other people's lives...fair enough...but I'm 55 years old and I was suddenly asked to use the Internet in my work...

As regards non-users, although both users and non-users raised information, education and awareness as parameters that problematise the technophobic and traditional character of Greek society, non-users offered arguments which did not provide a clearly positive or negative answer to the relevant question. Non-users referred to technophobia in Greek society, pointing to online risks, media propaganda, family over-protectionism and societal reaction to new technologies. Also, they noted the role of a lack of awareness and incentives in their decision not to use the Internet and in the only apparent, as they say, dismissive attitudes of people to the Internet. Ioannis (25 years, male civil engineer, group 4) pointed out the contrasting attitudes of

Greek society to different technologies, a view we also meet in the literature with regard to mobile telephony and the Internet:

In general...I think we are quite reactive to anything that changes our habits and lifestyle. On the other hand, we immediately adopt trends that come from abroad as long as they do not require effort and are fashionable. About the Internet....I think that some of us said that we don't have the knowledge and incentives to use it...

Non-users have different views of the cultural characteristics of Greek society depending on their individual circumstances and contexts of life. In group 3, Maria (45 years, female housewife) and Dionysia (36 years, saleswoman), two female non-users in their mid-30s, expressed concerns about online risks, arguing that such risks may influence children. On the other hand, Dimitrios (18 years, male student), a young non-user in group 3 who receives some pressure from his family, argued that such concerns are enforced by the media and the over-protective character of the Greek family:

Maria: (interrupts) ...every time I see my kids obsessed about...how is it called?...surfing?...yes, I think surfing...or when they go on English websites...I'm so worried because I don't know what sort of things they come across...

Dionysia: (interrupts) Yeah, it's what I told you: porn, crimes....you can't be certain, especially when it comes to children...

Dimitrios: (interrupts) ...come on, let's not exaggerate...I think most of these things are made up...by the media or...old generations, parents, are very narrow-minded and scared of everything new that we [children] come across...

8.5.2 *Ignorance and a lack of awareness in Greek society*

Eager Internet users (e.g. Stefanos and Petros in group 1) argued Greeks are unaware of and inactive concerning new technologies, while stressing the role of individual responsibility. On the other hand, those who are not great supporters of the Internet (e.g. Agapi and Apostolos in group 1) questioned individual responsibility and, although they admitted there is social ignorance and inactivity, emphasised the role of the state and education:

Agapi (35 years, female decorator): We all have so many things to deal with...I don't know how we can be aware and keep up with everything new that is coming up. Yes, there is a lack of awareness that makes us inactive...but who is responsible for this?

Stefanos (32, male investment analyst): Sorry Agapi, but why should we always expect everything to be given to us? Aren't we, as individuals, responsible? ...Besides, if the authorities force us to keep up with new technologies, there will be a huge public reaction.

Apostolos (44 years, male civil servant): Stefanos, I don't agree. I mean, how am I expected to use such technologies when I haven't been taught anything about them?

Petros (19 years, male, military service): ...but I see how negative my parents are when I ask them to learn to use computers and other gadgets... I'm giving free training and they do not take it (laughs).

Similarly to users, non-users expressed diverse views, problematising the issue and challenging discourses about social ignorance in Greece. However, most

acknowledged the need for more information and training, and assigned this responsibility to the media, education and the state:

Interviewer: Some of you mentioned that people should be more informed. Who is in charge of that?

Andreas (50 years, male doctor, group 3): Schools, the media, the state...who is responsible for the Internet in Greece? Also, for professionals like me, professional associations...

Non-users who expressed reservations about the Internet attempted to challenge the problematic of social ignorance. They argued that training and education do not necessarily drive people to change their views about the Internet. The words of Anna (38 years, female teacher) in group 4, who is particularly negative regarding the Internet, are indicative:

I'm not saying that we are informed, but that this is not necessarily a problem as more information would not necessarily change our decision not to use the Internet.

8.5.3 *Social inactivity*

When non-users discussed the existence of non-technocratism and traditionalism in Greek society, some challenged discourses about Greek people's inactivity. Part of this argument was 'identity', as understood on the grounds of the notion of 'Greekness', as well as busy everyday schedules and traditions that go against the rapid changes that technology brings about:

Dionysia (36 years, female saleswoman, group 3): (interrupts) ...again, why inactive? We have so many other things and responsibilities in our lives...

Antonia (33 years, female self-employed, group 3): (interrupts) ...yeah, yeah...all these labels...we are not like other people, let's say we are unique, we have our own identity...is that a bad thing? It may be a good thing as well...

On the other hand, non-users who are considering to start using the Internet in the future, such as Ioannis (25 years, male civil engineer) in group 4, partly acknowledged the existence of social inactivity and individualism in Greece. However, even these non-users stressed the role of a lack of information and awareness and the state's responsibility in this respect:

I think the biggest problem is that the authorities in charge do not do anything to help us, ordinary people, become more aware...more into things...

8.6 *Internet regulation and policy*

The second part of the interviews explored people's views of the role of Internet regulation and policy in their own practices as Internet users and non-users. The questions posed to users and non-users differed somewhat since the challenges

Internet regulation and policy encounter in response to users' and non-users' needs also differ.

8.6.1 Users' awareness and evaluation of Internet regulation and policy

The discussion with users revolved around issues of awareness of and satisfaction with Internet regulation and policy. As summarised in Appendix 8 (Table A.8-6), the same questions were posed separately for regulation and policy.

How Internet regulation and policy are understood

The discussion began with introductory questions about how users understand Internet regulation and policy. Those who participated in the discussion most were advanced Internet users. The less advanced users remained silent most of the time, though they were encouraged to participate.

Some users understood the term 'regulation' quite well, although there was a tone of uncertainty in their voice: 'Isn't all laws...legislation concerning the Internet and its use?' (Stefanos, 32 years, male investment analyst, group 1). If uncertainty characterised users who are familiar with the Internet, those with a limited scope of Internet use either stated a lack of knowledge or remained silent: 'Ok, it's obvious from the word itself...It's about rules and laws, but I don't know which rules and laws they are' (Eirini, 32 years, female accountant, group 2):

As regards Internet policy, only one user, Stefanos (32 years, male investment analyst) in group 1, said what Internet policy is. Two other users in group 1 agreed with Stefanos, as he was the savviest and most fervent user of the group: 'I will take the risk first (laughs). Policy is something more general...it has to do with how people get informed, are taught, how they are given equipment and infrastructure to use the Internet... Is that right?' (Stefanos). The same picture appeared in group 2, where only the advanced users said what Internet policy is.

National and EU Internet regulation and policy

Although two interviewees in group 1 expressed an opinion about the differences between national and EU Internet regulation, there was a strong feeling of uncertainty and confusion in their words. Stefanos' words in group 1 show he lacked confidence about national regulation and its efficiency:

...you can never be certain about Greece (laughs). Even if we have the same laws as the rest of Europe, you cannot be sure that they are respected and followed...the Greek state is always an exception when it's about applying the law (laughs).

A lack of trust in and confidence about the Greek state was even stronger in group 2, where the most advanced users stated they lack information about national regulation in comparison to EU regulations. Also, they argued they would not be

surprised if Greece lags behind as Greek authorities do not apply, in their opinion, any rules in time and in the way they are supposed to. Users in group 2 debated individual (societal) and political liability regarding the failure of timely and full implementation of rules and regulations in the country, with only Michalis (17 years, male student) arguing that this is not only political but also individual responsibility:

I really don't know...but I wouldn't be surprised if we lag behind...in Greece nothing happens in time...but is this related to the state only? I mean, who is the state? What does society do?

As regards Internet policy, although most users said they are not informed about national policies in comparison to EU policies in the field, they expressed suspicions about where EU funding goes to in Greece, questioning the national policies in effect. Thus, it became obvious that people mistrust the Greek state and the way it manages money and public interest overall. However, in the interviews this feeling of mistrust did not rely on any specific argument or evidence, showing a generally negative attitude to the country's decision-makers' practices.¹³³

Stefanos (32 years, male investment analyst, group 1): Besides, isn't the EU giving us money to develop in this area too? If we take into account the news about the small amount of money that is used properly, I wouldn't be surprised if the country was behind in policies as well...

Only Antonios (44 years, male self-employed) in group 2 provided specific examples to support his view about national policy in comparison to EU Internet policy. He argued that education, the media system and lack of awareness-raising initiatives have contributed to policy delays in the Greek information society:

Greek education only initiated modules on new technologies in the last couple of years and these are, as far as I know, somehow theoretical ... Also, we can look at the role of the media...the media do not forget to remind us of all the bad things that can happen, propagandising against the Internet in particular... also, have you ever seen an authority systematically implementing any programme for citizens' awareness of new technologies?

Importance of regulation and policy for Internet use

All users in group 1, but Petros (19 years, male), the youngest user, claimed that regulation is very important for users' security. In response to Petros, users such as Agapi (35 years, female decorator) offered arguments which are close to the 'media panics' discourses. Also, users raised the tone of their voice, associating Internet regulation with their own experiences, as shown later in the analysis:

Petros: Don't take me wrong...I understand these things, but the Internet is meant to be a space of freedom and free expression. We don't need police on the Internet!

Agapi: Of course we need police...if anyone could do anything on the Internet...it would have been a jungle that no one would like...those who steal money, abuse children and commit crimes online...

Apart from age differences, the importance of Internet regulation relates to usage experiences and reasons for Internet use. Kwnstantina (55 years, female

¹³³ Only Myriam (27 years, student) in group 1 argued about individual responsibility: 'I see people around me who are indifferent, being those who decide about who will govern. I mean, we have become pessimistic, only accusing others'.

administrator), who only uses the Internet because she has to, and Pantelis (25 years, male computer scientist), who studies this field, held contrasting views about the importance of regulation. Such contrasting views also raise awareness of regulation as an important parameter:

Kwnstantina: ...for me, regulation has played no role in my decision to use the Internet...that was a clearly practical decision...besides I have no clue what the Internet regulation is (laughs).

Pantelis: (interrupts) ...yes, but we cannot generalise...even if people do not know much about regulation....yeah, I think it's important when thinking how it may influence your rights and security.

As regards Internet policy, most users argued that policy is important. The reasons they gave for that differed though, as they drew on their experiences and the Internet's role in their own lives to argue about the importance of policy. For instance, Pantelis in group 2, a computer scientist and professional in the field, explained people's mistrust in policy by bringing up the slow IT market development in the country. Although his professional familiarity with information technologies goes beyond the average expertise of Greek users, his remark allows a more complex picture of policy, market and societal development to arise, indicating interdependencies between these factors:

As a professional...I mean, what are the policies to facilitate the provision of equipment, the establishment of infrastructure and the production of services...as today there is literally no IT market in our country.

Where Internet regulation is needed

Everyone in group 2 emphasised the importance of regulation for users' security, stressing the restrictive role of Internet regulation. Only the youngest user, Michalis (17 years, male student), viewed regulation as a means to overcome barriers of access to online content and services, thus presenting the liberating potential of regulation:

...personally, I would like all companies and people having a site to provide free access to users...my impression is that an increasing number of sites have become commercial and that should stop ...and don't tell me that authorities cannot do something about that...

Where authorities were needed

Users reported that they have asked for various authorities' help for many different reasons, depending on the problem they faced. Most instances relate to protection against unwanted and harmful online content, whereas only Petros (19 years, male, military service), the youngest in group 1, said he has not asked for any help.

Although some users referred to a lack of awareness, as well as to the insufficiency and inefficiency of regulation, satisfaction levels with the help provided by the authorities varied amongst users, being case-dependent:

Stefanos (32 years, male investment analyst): You said you have your own website...

Agapi (35 years, female decorator): Yes...

Stefanos: This is a case where you decide to make yourself really visible and the truth is that no law or authority can protect you 100%.

Where people go if in need

Most users complained about Internet policy in the country and seemed not to know who to contact if in need. In this respect, Stefanos (32 years, male investment analyst), the savviest user in group 1, pointed to a lack of trust in the country's political authorities:

Stefanos: You said you live in the UK, right?

Interviewer: Yes...?

Stefanos: That is why you have probably forgotten how things work in Greece. Not even groups that exert pressure can change politics in the country... imagine how powerless we, individuals, are.

In group 2, only one interviewee, Pantelis (25 years, male student), participated in this discussion, even though he has never asked any political authority for help. I would argue that the silence of the other interviewees indicates the existence of a gap between the political authorities and the body of Internet users in the country.

More or less regulation and policy needed?

Most users stated they are in favour of regulation without, however, asking for more regulation. Only Petros (19 years, male, military service) in group 1 asked for less regulation, provoking the strong opposition of the other group members:

I get annoyed when I'm blocked from content I would like to use...or when I try to download content and I'm asked to provide personal information. I want regulation when I ask for it, not when it's imposed.

Users in group 2 raised the importance of awareness of regulation when they discussed whether more or less regulation is needed. A debate arose between those arguing that authorities should provide people with more regulation and information about regulation, and those stressing the responsibility users have to be informed about Internet laws and regulations. At this point, issues related to 'citizenship' and citizens' role came to the fore:

Antonios (44 years, male self-employed, group 2): ...let's not avoid our responsibilities...we are not serious users...that is why we don't try to be informed and don't take things seriously.

Kwnstantina (55 years, female administrator, group 2): (interrupts): Yes, all right, but you cannot ask people to replace authorities... I don't have the knowledge and, all right, the intention to push authorities for more regulation or information about regulation.

Regarding Internet policy, users emphasised the quality, efficiency and visibility rather than the quantity of Internet policies. This brought up issues concerning the ways and extent to which Internet policies are close to users and their needs or experiences:

Eirini (32 years, female accountant, group 2): I think this discussion is theoretical...we are talking about policies, laws...things which are quite distant from us. I don't think we really understand the meaning of all these nor their role...and, as Kwnstantina mentioned, our Internet experiences are not...let's say...in direct communication with what happens when decisions are made.

Users' satisfaction with Internet regulation and policy

Users' satisfaction with Internet regulation depended on individual experiences. On the other side, they realised that regulation cannot protect them perfectly, with those who are more positive regarding the Internet being less critical of regulation. For example, in group 1 Agapi (35 years, female decorator) was less in favour of the Internet and less happy with regulation, whereas Stefanos (32 years, male investment analyst) defended regulation and argued that individuals should take the risk:

Stefanos: I don't think it's a matter of satisfaction...It's a matter of how much you accept possible risks and the measures you take to encounter them.

Agapi: Yes, but, as you saw, in my case there is no way to avoid offensive content posted on my website.

Stefanos: There should be a way...by not having a comments link...

The argument that regulation cannot cover all protection areas was linked to the presence of regulation in users' lives and to usage experiences. As Anastasia (27 years, female teacher) in group 2 pointed out, regulation is not visible to ordinary people and, therefore, not much knowledge about regulation is established among users:

...when I wanted to buy a book on the Internet, I was asked to provide a lot of information concerning my personal hobbies, the books I read... I don't think there is any authority to advise on such issues... I had to cancel the purchase.

Awareness came up as a significant parameter in users' experiences of online risks and their requests for help. Even users with different user profiles, such as Michalis (17 years, male student) and Antonios (44 years, male self-employed) in group 2, raised a lack of awareness as a problem that discourages users from asking for help:¹³⁴

Michalis: Lots of times I have felt uncomfortable with the content and requests I come across online, especially those concerning personal info...but I usually avoid such sites. So, I haven't asked any authorities for help and haven't complained as I don't really know which authority to consult.

Antonios: ...what Michalis said is a problem...I mean, how many of us know which authority is in charge of what regulation?

¹³⁴ Eirini (32 years, female accountant) in group 2 has a narrow scope of activities and raised the issue of awareness as one reason she does not engage in a wider range of online activities.

Regarding Internet policy, most users said they are dissatisfied with policy in the country. Training, awareness and cost are the main sources of dissatisfaction, while infrastructure and public access also play a role. The pessimism that interviewees, such as Stefanos (32 years, male investment analyst) in group 1, expressed about the future again poses the issue of lack of trust in the state:

I would like to see that no politicians but experts in the field have the money and take all the initiatives. I don't trust the state...as the money is usually wasted, everything moves slowly and bureaucracy cancels the nice ideas experts have.

Also, users brought up issues associated closely with their usage experiences and needs as sources of dissatisfaction with Internet policy. Thus, Internet policies were evaluated depending on users' circumstances of life and individual needs and desires:

Petros (19, male, military service, group 1): I don't know how things are in schools now, but when I was at school two years ago there was no sufficient equipment, there was slow Internet and not much time and training for us to work on computers...

Agapi (35, female decorator, group 1): As Petros said, training is a must, not only for students but also for other people, especially older generations. I'm saying this because I know how difficult it's to learn outside school and when no friends or relatives can help you.

8.6.2 Non-users' awareness and evaluation of Internet regulation and policy

A similar set of questions was posed to non-users (Appendix 8, Table A.8-7). The questions explored non-users' evaluations and the perceived role of regulation and policy in their decisions not to use the Internet.

How Internet regulation and policy are understood

Similarly to users, non-users had serious difficulty defining and understanding Internet regulation and policy. Only a minority seemed to quite understand Internet regulation:

Andreas (50 years, male doctor, group 3): Isn't it about rules, laws, legislation?

Interviewer: More specifically...?

Andreas: Rules, laws and legislation about the content and services available on the Internet?

Likewise, Internet policy was understood in a broad way and only by a minority of non-users:

Evangelia (29 female shop owner, group 4): Isn't it similar to regulation? (laughs).

Ioannis (25 years, male civil engineer, group 4): Not sure...isn't about political initiatives? My impression is that if we look at the etymology of the two words, politics is basically about everything...

National and EU regulation and policy

Non-users seemed to lack knowledge of national regulation and policy more than users. No non-user was aware of the status of national Internet regulation,

particularly in comparison to EU regulations. Although they were not informed, they assumed that Internet regulation in Greece lags behind the respective regulations in Europe. They argued about the 'inefficiency' and 'incompetence' of the Greek state to respond to their needs and articulated a general dismissal of the Greek state. Also, they judged official regulation on the basis of their general personal feelings about the social accountability of the state in multiple domains of social life, without being in the position to support such arguments:

Andreas (50 years, male doctor, group 3): I'm not certain, but the Greek government does not do enough, I think...other European countries are far more developed and I assume their Internet laws are more efficient than ours.

Konstantinos (62 years, male plumber): How can we know those things? We don't even use the Internet...but I would agree with Andreas about the incompetence of the Greek state...we always complain but nothing never happens...politicians only look for votes and do nothing for us citizens.

From the above, it can be argued that non-users viewed the state and its regulations as not sufficiently accountable to society. They offered criticism even if they lacked knowledge about Internet regulation. The only exception was Ioannis (25 years, male civil engineer) in group 4 who problematised the issue and had some knowledge about areas where the Greek state has failed to implement EU regulations:

Tough question! What I have heard is that the EU has charged Greece with fines due to its delay in implementing EU laws and directives. This concerns regulations in education, public funding of organisations, environmental policies...what else? I wouldn't be surprised if we have failed to implement the Internet regulation that other European countries have adopted.

Regarding Internet policy, no non-user was aware of the status of Greek Internet policy, particularly in comparison to EU policies. Their discourses were similar to those concerning regulation as most admitted they do not know how to answer such questions. Nevertheless, a number of them assumed that Internet policies in Greece lag behind other countries, saying that this explains the low Internet diffusion in the country:

Andreas (50 years, male doctor, group 3): ...all plans and programmes for Internet diffusion in our country are unavoidably affected by the Greek state's inefficiency...you said before that Greece has one of the lowest Internet diffusion rates...ok? Why is that? The ways the Internet and its services are accepted by all of us show precisely the policies and initiatives taken by the authorities in charge...

Role of regulation and policy in non-usage

Concerning the role of Internet regulation and policy, non-users argued that Internet regulation has not effected their decision not to use the Internet:

Andreas (50 years, male doctor, group 3): Ok, it's important to feel safe and to know what you can do when online...but for me...no, regulation is not the reason for not using the Internet...

Interviewer: ...some of you mentioned before issues of online crimes, porn etc...

Dionysia (36 years, female saleswoman): Yes, such issues would be important if I needed to use the Internet...

Non-users instead said that other parameters influenced their decision not to use the Internet. They mostly argued about a lack of desire and need:

Evangelia (29 years, female shop- owner, group 4): Although I have thought of online dangers, this has not been the main reason for not using the Internet... I would say it's more a lack of interest and motivation that made me neglect it.

On the other hand, they considered regulation to be important for users' online security. Only the youngest of group 3, Dimitrios (18 years, male student), did not support Internet regulation, arguing that users should be free to do anything they like online.

In contrast to regulation, some non-users considered that Internet policy plays some role in the decision not to use the Internet. This was argued by those intending to use the Internet in the future, such as Andreas (50, male doctor), and those familiar with new technologies, such as Dimitrios (18 years, male student), both in group 3.

Interviewer: ...so, you think that policies may influence people's decision to use the Internet...

Andreas: ...yes, certainly.

Dimitrios: We're behind and policy is a reason...we need facilities, infrastructure, services, education...

In group 4, non-users asked for 'better' Internet policy – different interviewees understood the word 'better' differently – although they did not consider policy the principal reason for non-use of the Internet:

Ioannis (25 years, male civil servant): ...issues related to policy have not been the principal reason for not using the Internet... On the other hand...if I had been provided with better information and more chances to get familiar with the Internet, I could be a user...I'm not sure though...

Where regulation and policy are needed

As non-users cannot reflect on Internet regulation and policy through experiences of use, they were asked about general areas where regulation and policy may be needed.

Although they were uncertain about what Internet regulation consists of and how it functions, they acknowledged that it is important for users, being in a way quite close to what users themselves argued. Non-users framed the notion of utility of regulation on the basis of their own concerns and needs in everyday life and in terms of Internet regulation. Anna (38 years, female teacher), Evangelia (29 years, female shop owner) and Ioannis (25 years, male civil engineer), all in group 4, recognised the utility of regulation in relation to children's online protection, e-commerce and the reliability of online information, respectively:

Anna: ...thinking that my children will start to use the Internet soon...I would like to know how I can deal with adult content online or online chatting with strangers that could put my children at risk.

Evangelia: I agree that protection is very important for users. If I was a user, I would definitely like to know how I could make purchases for my shop without risking my money...

Ioannis: Yes, safety and security are important, but I think that the Internet is mostly used for information searching. I think that accuracy of information should be guaranteed.

Regarding Internet policy, only two non-users in group 3 (i.e. those who acknowledged the role of policy in their decision not to use the Internet) identified areas where policy can play an important role:¹³⁵

Andreas (50 years, male doctor, group 3): I think I mentioned some of those I consider important...training, information, yeah, education....

Dimitrios (18 years, male student, group 3): ...services, infrastructure...facilities, in general...

Non-users in group 4 pointed to the role of policy in awareness of and access to the Internet as well as in young people's lives. However, there seems to be a contrast between the positive role that policy can play and the often negative role it actually has in people's lives. This contrast reveals some of the contradictions between policy mission and actual policy practices, as reflected by non-users:

Ioannis: Isn't policy to do with information, awareness, training, education...what else?

Anna: I would again like to see the broader picture...

Interviewer: What do you mean?

Anna: ...in order for young people to find a job, they have to know computers and the Internet. Why is that? ...who determines how much we have to pay for Internet and how likely we are to access it?

Evangelia: Is policy something positive or negative? Is it politicians or the market that pushes young people to have as many qualifications as possible to get a job?

8.7 Public discourses on Internet regulation and policy: reflecting on the elite actors' discourses

In the last part of the interviews, users and non-users were asked to discuss public discourses on Internet regulation and policy as had been articulated by the elite actors. An overview of the main arguments is provided in Appendix 8, Table A.8-8.

8.7.1 Failure of Greek authorities to adopt EU Internet regulations and policies

Regarding elite actors' argument about Greece's failure to implement EU Internet regulation, Stefanos (32 years, male investment analyst) in group 1 of users, who had already revealed his uncertainty about the Greek state's performance, at this point looked satisfied thinking that the others also consider the Greek state inefficient. Even Apostolos (44 years, male civil servant), who had been very quiet during the discussion about Internet regulation and policy, now declared his agreement with Stefanos' views. Apostolos is not informed (something he admitted) and the

¹³⁵ The other group members did not answer this question.

Internet is not important in his life. He is critical of how the public sector and politics operate in Greece, while himself being a member of the public sector: ‘...everything in Greece happens at a slower pace than in the rest of developed Europe’ (Apostolos).

In group 2 of users, only Pantelis (25 years, male), a computer scientist, accepted the elite actors’ argument about delays in Greek Internet regulation, pointing to how such delays influence society and the IT market in Greece:

Pantelis: I have the sense that we lag behind other European countries, as neither people nor the market keep up with the developments in other countries.

Interviewer: You think that delays in the broader societal context are reflected on policy and regulation?

Pantelis: No, I would argue the opposite...policy and regulation delays are reflected in society.

On the other hand, only some non-users discussed the elite actors’ argument that Greek authorities have failed to adopt EU regulations and policies. In group 3, Andreas (50 years, male doctor) and Dimitrios (18 years, male student) were the most familiar with the Internet, leaving open the possibility of using it in the future. Thus, they were those who answered questions about Internet regulation and policy, being overall very critical of the state and Internet authorities in the country. However, they failed to offer concrete arguments in support of their criticisms:

Andreas: ...don’t we constantly hear that Greece lags behind, that Greek governments do not do this or that? Why should the Internet be an exception...?

Interviewer: ...do you have something specific in mind?

Dimitrios: ...what do you mean? Ok, I don’t know what exactly the Greek government doesn’t do, but I don’t hear what the Greek government does do for new technologies either...

Non-users in group 4 articulated the same criticisms, regardless of whether they were planning to use the Internet or not. These non-users also attempted to justify their negative views of the Greek state and authorities:

Anna (38 years, female teacher): ...if you look at education you will find an example of where our country lags behind. Colleagues of mine who teach new technologies told me that kids are not provided with the technical facilities and the curriculum that kids in other countries are given. Education is a critical area of policy-making...

Hence, the majority of non-users kept a distance from policy discourses, admitting they are unfamiliar with such matters. Most were not particularly concerned with the Internet, while having no intention or desire to use it in the future.

8.7.2 Non-modernised, delayed, technophobic and bureaucratic public administration?

The interviewees were asked about the elite actors’ argument that the Greek public administration lacks modernisation and is bureaucratic and techno-phobic. At this point, the individualistic thinking of a significant number of interviewees emerged.

In group 1 of users, Apostolos, a male middle-aged civil servant, drew on his everyday experiences to argue about the techno-phobic character of the public administration, while claiming that change cannot start with him as he would prefer not to use the Internet at work. At this point, Stefanos, a male businessman in his early 30s, challenged Apostolos, making him become quite defensive:

Apostolos: Yes, definitely, and this is unfortunately something I experience everyday.

Stefanos: Yes, but you said you didn't like it when you were asked to start using a computer at work...

Apostolos: Yes, I don't know why modernisation of the public administration should start with me!

Generally speaking, people in Greece have a negative predisposition to public administration employees, while themselves pursuing a career in the public sector. In the focus groups, users with such predispositions did not specifically refer to technology but implied that technology does not play a significant part in the public administration, somewhat accepting what the elite actors argued:

Agapi (35 years, female decorator, group 1): ...in our transactions with the public administration we come across people's laziness, rude behaviour and irresponsibility. However, I'm not sure what this has to do with the Internet...

Petros (19 years, male military service, group 1): I hate the idea of becoming a civil servant...you cannot breath there...no one works, everyone thinks they have authority and never serve citizens... about technology...It's funny just to think about it!

Although all users agreed with the elite actors, they had diverse views of how the adoption of new technologies is affected by the public administration. They also expressed differing views of whether bureaucracy and techno-phobia should change, linking these trends to what they called 'identity' and 'traditions'. At this point, there were striking differences between advanced and average Internet users, with the latter favouring the maintenance of 'identity' and 'traditions':

Antonios (44 years, male self-employed, group 2): Look and say: isn't bureaucracy the main characteristic of a giant public sector? Isn't a lack of technology and expertise a major problem when citizens are served by public services? Isn't negativism the most popular attitude of members of the public administration when something new is introduced to them?

Anastasia (27 years, female teacher, group 2): ...we can see these things in society as well...don't tell me that we are not traditional and critical of anything new?

Eirini (32 years, female accountant, group 2): ...we have our own identity and some things Anastasia mentioned are very deep in our traditions and lifestyle. Can these characteristics change? ...shall we desire such a change?

On the other hand, only a minority of non-users commented on elite actors' discourses about the non-technocratic and bureaucratic character of the country's public administration. They did not challenge such discourses and emphasised phenomena of inefficiency and injustice that establish, in their views, a highly bureaucratic and incompetent public administration:

Andreas (50 years, male doctor, group 3): Bureaucratic for sure. Who could ever doubt about that? (laughs).

Antonia (33 years, self-employed, group 3): (interrupts) ...let's not pretend...people without qualifications are appointed to the public administration...can you expect a higher degree of efficiency?

In this respect, non-users argued that both politicians and ordinary people who work in the public sector are responsible. On one hand, they charged those involved in the public administration for contributing to traditionalism and bureaucracy and, on the other, they considered them lucky for being able to work in the public sector. This enforces the sense of individualism that the focus group discourses contain.

8.7.3 *More socially accountable regulations and policies needed?*

Users and non-users commented on the elite actors' discourses about the socially accountable character of Internet regulations and policies by mostly drawing on other decision-making fields.

Users suggested more socially accountable policies. They interpreted social accountability and the directions to take in different ways, depending on their attitudes to the Internet and their perceptions about risks and opportunities the Internet brings into everyday life:

Pantelis (25 years, male student in computer science, group 2): ...as a professional, I think that social policies should go hand-in-hand with market policies. This means more production and trade of equipment, better infrastructure and networks...better services, of course...so more reasons for people to use the Internet.

Antonios (44 years, male self-employed, group 2): ...but social policies are also needed for education and training...the state can introduce media programmes that will inform people about technology...

Kwnstantina (55 years, female administrator, group 2): ...also, more awareness of risks and ways for users to be protected...

Likewise, some non-users argued that more socially accountable policies and regulations are needed. However, pessimism was present in non-users' arguments as they argued it is unlikely that more socially accountable regulations and policies will be in effect. This concerned a kind of general pessimism which does not necessarily derive from how things work in relation to new technologies in the country:

Antonia (33 years, female self-employed, group 3): ...but who cares about people, citizens? I'm not talking about the Internet specifically...It's about everything...

8.7.4 *High cost, lack of infrastructure and non-satisfactory services*

Towards the end of the interviews I addressed public discourses that crosscut politics and society and raise practical issues such as cost, Internet infrastructure and Internet services.

Only a few users responded to these discourses. They argued that cost is higher in Greece than in other European countries and that Internet infrastructure and

services are not as satisfactory as they should be. Similarly, a certain number of non-users, such as Dimitrios (18 years, male student) in group 3, were aware of or thought that cost is higher in Greece than in other European countries.

Dimitrios: Yeah, cost is very important as friends of mine who know how things are abroad told me that the cost of a connection in Greece is far more expensive than in developed countries of Europe.

For non-users, cost had quite a relative meaning as they considered affordability of the Internet on the basis of personal financial status:

Ioannis (25 years, male civil engineer, group 4): ...this is an issue for those who cannot afford the Internet, but I cannot say whether this influences people's decisions to use it...

Non-users' lack of knowledge about the Internet made them not to comment on the elite actors' argument that in Greece no satisfactory Internet infrastructure and networks are available. Even Andreas (50 years, male doctor) in group 3, who attempted to comment, expressed uncertainty: 'I don't think so...but I'm not certain either...'

8.8 *Qualitative reflections on the survey findings and integration with the elite actors' discourses*

In this section, I critically review the focus groups findings. In Section 8.8.1, the findings are reviewed relative to the survey findings. Section 8.8.2 presents the ways the focus groups responded to the elite actors' discourses.

8.8.1 *Focus groups and qualitative reflections on the survey findings*

Media usage and the parameter of age

Internet users and non-users use one or more type of media daily. This was also shown in the survey since nearly all survey respondents have a telephone or television at home, and a significant number have home access to computer and the Internet. This challenges the contribution of access barriers to the low Internet penetration in Greece. However, the focus groups went beyond access and usage issues. They illustrated that users and non-users appreciate the role of media in various domains of everyday life and that their attitudes to and their usage of media depend on circumstances and priorities in life. Non-users in particular named and evaluated media depending on how they influence their everyday lives.

The focus groups provided answers to why demographics such as age play a role in media use. They demonstrated that age cannot be seen as a demographic *per se* as it determines people's life context, work interests, hobbies and lifestyle in general. Thus,

age partly accounts for the fact that Internet users prioritise work activities as the most important reason for using the Internet. Age can also explain why young Internet users emphasise entertainment and communication purposes of media usage, whilst elderly and middle-aged non-users consider that the Internet is not meant for them.

Internet adoption and the role of everyday culture

Internet users: quality of use and attitudes to the Internet

The survey found that the majority of Internet users are involved in limited online activities, are dial-up users and only a small number are new users. Also, it found that the quality of use is affected to some extent by users' evaluation of the Internet's role in everyday life. The focus groups showed that personal choice and integration of the Internet into one or more areas of everyday life influence significantly users' breadth of usage, time spent online, online activities, as well as attitudes to the Internet. Regardless of the general acceptance of the Internet's benefits, those who have not integrated it into their everyday lives argued they would not mind if they had to stop using it in the future. This explains the survey finding that, although users evaluate the Internet more positively than non-users, nearly half of them think that non-usage would not affect them significantly.

In addition, the focus groups confirmed the survey finding that the various parameters of quality of usage are interlinked. Literate users are developing a wide range of Internet activities. However, literacy is a complex notion and, in the focus groups, it seemed to relate mostly to users' profession and lifestyle. On the other hand, all demographics but age did not emerge in the focus groups as important determinants of Internet literacy and usage patterns. Although the survey showed that demographics still matter, parameters such as income, education and gender do not directly account for Internet usage and quality of usage. Demographics were presented in the focus groups as influencing everyday life conditions and lifestyles, being integrated into them.

Moreover, the focus groups enriched the survey findings that the second most important place, after 'home', where people access the Internet is 'work'. In the focus groups, work appeared to be one of the major forces making people use the Internet. In this regard, work activities attract users' interests about the Internet as only advanced and dedicated users go beyond work activities online. On the other hand, work plays an important role in how non-users assess the likelihood of using the Internet in the future, as work requirements and changes at work seem to influence likelihood.

Regarding online risks, the survey found that the majority of users in Greece are digitally constrained. Insufficient awareness of online risks, lack of confidence and skills in encountering such risks, as well as inadequate self-protection, were some of

the constraints identified. The survey did not find any causal relationship of online risks and self-protection with users' evaluation of the role of Internet in everyday life. On the other hand, the focus groups showed that users' concerns and self-protection are influenced by their expertise, knowledge, awareness and sense of responsibility. Literate users (literacy here reflects the level of knowledge, skills and awareness) are less concerned about online risks and more active in taking security measures, with everyday settings, values and resistant attitudes influencing the degree of their literacy. Thus, even if life circumstances do not influence users' perceptions of online risks and self-protection directly, they have an indirect relationship by affecting aspects of literacy.

Users' evaluation of the Internet in everyday life

The survey found that demographics, patterns of use and online risks play an important role in how users evaluate the Internet in everyday life. An apparently different picture was provided in the focus groups since the Internet's role in users' lives seems to be determined by purposes of use and reasons for using it in the first instance. Whilst most use the Internet for work purposes, the focus groups showed some use it willingly and others feel 'forced'. The former engage with a great breadth of online activities and integrate the Internet into their lives; the latter point to the lack of 'choice' not to use the Internet, using it only when required. This indicates that the parameter of 'resistance' or 'dismissal' is significant not only for usage *per se* but also for the quality and level of adoption. On the other hand, circumstances, priorities and values in life are critical parameters for shaping such 'resistant' attitudes, and they work in two directions: as enablers or forcing factors of Internet usage, on one hand; as facilitators or obstructing factors of advanced usage and integration of the Internet into everyday activities, on the other.

The purposes of and reasons for Internet usage discussed in the interviews can be thought of as being closely associated with patterns of use, fears of online risks and demographics that the survey indicated as determinants of users' evaluation of the Internet in everyday life. This is because the reasons people use the Internet significantly determine patterns of usage, while different purposes of usage may bring about different concerns about risks. Nevertheless, these associations are multi-directional and vary depending on specific cases of usage.

Non-users and forces driving non-usage

As regards non-users, the survey indicated the existence of a 'dismissive culture' in Greece because most non-users are non-interested in and have no need to use the Internet. Also, the survey found that the decision to use the Internet depends directly on Internet availability, computer use and demographics but not – at least directly – on the evaluation of the Internet's role in everyday life. The focus groups disentangled the complexity of these findings. On one hand, the interview texts confirmed the survey

findings, showing that a lack of need drives non-usage. On the other, when non-users talked about a lack of need they mostly referred to work or study domains of the everyday, prioritising them the most. At the same time, some brought up lack of education, incentives and stimuli as other forces that contribute to non-usage. The parameters of 'need', 'learning' and 'incentives' must be seen in an everyday life context since non-users viewed these parameters in close association with their life context and priorities. This is not necessarily opposed to the survey finding about the non-existence of a direct relationship between everyday life and Internet use; nevertheless, one cannot be certain about how such parameters associate with Internet availability, computer usage and demographics that the survey found to be significant for people's decisions to use the Internet.

Regarding the likelihood of future use, the survey found that most non-users are unlikely to start using the Internet. The focus groups showed that the likelihood of and desire for future use are interconnected, while determined by non-users' sense of 'need' and their evaluation of the Internet as part of their life priorities. Age and life circumstances or priorities that age brings along influence the likelihood of and desire for future use, with the middle-aged or elderly being unlikely and unwilling to use the Internet in the future.

Non-users' evaluation of the Internet in everyday life

Regarding non-users' attitudes to the Internet, the focus groups confirmed the survey finding that, regardless of the generally positive views about the Internet, most non-users express concerns about the Internet when in the context of their individual lives. More specifically, in the focus groups some non-users had generally positive views of the Internet, but others argued about a lack of familiarity with the Internet and the need to keep the usual everyday order, considering the Internet a 'burden' or a possibly harmful medium, especially for children's lives.

Concerning the role of the everyday in non-users' attitudes to the Internet (i.e. the impact of non-usage), the survey found that non-users are influenced by their interest in and the possibility of future use, as well as by their general evaluation of the Internet's effects on various aspects of everyday life. The focus groups confirmed that awareness of and level of concern about the Internet's role in various domains of the everyday and that possible online risks matter for non-users' evaluation of the impact of non-usage. Parents in particular evaluate the impact of non-usage on the grounds of their understanding of the Internet's role in their children's lives. This highlights, in general, the family-oriented and over-protective character of Greek society.

Users' views of decision-making: links to Internet adoption and everyday life

Evaluation of national and EU policy and regulation

The survey found that Internet use does not depend directly on policy and regulatory indicators, such as awareness of and satisfaction with Internet policy and regulation. Although this was partly supported by the fact that users in the focus groups had a limited understanding of Internet policy and regulation, Internet expertise and integration of the Internet into everyday life seemed to influence users' awareness of Internet policy and regulation. Advanced users defined Internet policy and regulation better than those unwilling to use the Internet or with limited Internet usage.

Regarding the evaluation of Internet policy and regulation, the survey found that people in Greece evaluate EU policy and regulation as more efficient than national policy and regulation, with users being more positive regarding EU policy and regulation than non-users. The interview discourses enriched these findings and showed that users mistrust Greek authorities and their management of the public interest. Even though they were not particularly informed of national policy and regulation, they expected that EU regulations are more advanced than respective regulations in Greece and that the country's authorities do not take the initiatives that other European authorities do.

Role of Internet policy and regulation, and level of satisfaction

The survey found that the quality of Internet usage is partly affected by policy indicators, such as users' awareness of Internet authorities, while awareness of Internet policy and regulation is important for users' perceived impact that non-use could have on their lives. In the focus groups, most users accepted the general importance of Internet policy and regulation. Especially users' experiences of Internet usage and the reasons they use the Internet influence the emphasis they give to the role of policy and regulation in Internet usage, with less advanced users being less supportive of policies and regulations. These insights enrich the survey finding that indicators, such as the evaluation of Internet policy and regulation, awareness of Internet authorities and perceived accountability of Internet authorities, do not influence users' evaluations of the Internet's role in everyday life. The focus groups drew a complex picture of how policy and regulation are connected with people's decisions to adopt the Internet: policy and regulation should be looked at not only as factors that influence Internet usage and diffusion, but also as parameters that can be significantly affected by society's Internet knowledge and expertise.

Regarding the level of satisfaction with Internet policy and regulation, the survey found that users have a low degree of satisfaction and that their perceived

efficiency of Internet policy and regulation depends on their awareness of policy and regulation, as well as on the demographics of age and presence of children in the household. The focus groups generally confirmed these findings, while they shed light on factors to address separately for policy and regulation. Concerning Internet regulation, the focus groups showed that users recognise that regulation cannot cover everything, while their Internet experiences and awareness of regulation determine their level of satisfaction (e.g. fervent supporters of the Internet were less critical of regulation). In any case, most users acknowledge the need for more awareness and visibility of regulation so as to be able to ask for help and feel more secure when going online. Lack of awareness is a source of users' dissatisfaction with Internet policy as well. Users also pointed to other, more tangible, problems with policy, such as lack of training and public access to the Internet, high cost and lack of Internet infrastructure, arguing that these issues make them not trust state policies. However, such tangible issues were approached by users on the grounds of their Internet experiences and in the context of their needs and life circumstances.

Where users go when in need: more or less policy and regulation?

In the focus groups, only a small number of users had gone to authorities for help. This indicates a lack of awareness of policies and regulations, as well as insufficient trust in the country's authorities. This was also concluded in the survey because most respondents argued about a low awareness of authorities, with aspects of Internet adoption, such as frequency of use and self-protection, partly depending on such policy factors.

In addition, most users in the focus groups said they contact ISPs, pointing to possible ways in which the market may substitute policy and regulation. Besides, the silence of most users at this point of the discussion indicated their distance from the practices of decision-makers in the Greek information society. Thus, when they were asked whether they would desire more or less policy and regulation instead of making direct suggestions they argued about public awareness of Internet regulation, as well as the quality, efficiency and public visibility of decision-making in general. This illustrates that users need more information and better communication with the authorities, demonstrating they are dissatisfied with the level of social accountability of Internet policies and regulations in the country. This enriches the survey finding that the social accountability of Internet authorities is low and most people are unaware of Greek authorities in the field. Nevertheless, 'citizenship' and the role of ordinary people was debated in the focus groups. This saw divergent views between advanced users who argued about individual responsibility and less advanced users who blamed the country's authorities for omissions and failures.

Non-users' views of decision-making: links to non-usage and everyday life

Evaluation of national and EU Internet policy and regulation

The focus groups showed that, although non-users have limited and abstract knowledge of Internet policy and regulation, they expressed strongly negative views of national policies and regulations on the Internet.

In the survey, I found that perceptions of efficiency of policies and regulations are influenced by people's evaluations of the Internet's role in everyday life, as well as other policy indicators such as the perceived accountability of Internet authorities and awareness of Internet policy and regulation. The focus groups further specified the survey findings as they showed that non-users mistrust national policies and regulations, basing their criticisms on the performance of national policy and regulation in other domains. They also associated the social accountability of policies and regulations in the country with their abstract and unjustified argument that national policies and regulations lag behind the EU. They talked in particular about the 'inefficiency' and 'impotence' of the country's authorities, using these terms in the context of specific everyday settings.

Role of Internet policy and regulation in non-usage

The survey found that policy indicators, such as evaluation and awareness of policy and regulation and perceived accountability of Internet authorities, influence non-users' assessment of the role of Internet in everyday life and specifically their accounts of the impact that non-usage has on their lives, but not specifically the decision not to use the Internet. The focus groups provided a more complex picture and example of how findings can become richer when complementary data sources are employed. More specifically, in the focus groups non-users held contrasting views about the role of Internet policy and regulation in their decision not to use the Internet. On one hand, they mostly talked about a lack of need and desire to use the Internet, while acknowledging the importance of regulation for users' protection on the Internet. On the other hand, many argued for 'better' policy, saying that policy can somehow influence people's decisions not to use the Internet. Nevertheless, they avoided talking about the role of Internet policy in their own decisions not to use the Internet, while they used abstract characterisations to explain how Internet policy may have an influence (e.g. 'better').

Where Internet policy and regulation are needed

As discussed above, the survey found that policy and regulation influence non-users' evaluations of the impact of non-use on their lives. The focus groups looked at the association between Internet use and policy or regulation in more depth. Non-users acknowledged the need for Internet regulation in specific areas of Internet usage, resting their assessments on the grounds of what their own needs and priorities would

be if they were users. On the other hand, diverse views were articulated with regard to where policy is needed. There revealed a contradiction between non-users' normative arguments about the positive role that policy should play in boosting Internet usage and their views about, as they said, the actually negative impact of policy on people's lives, especially with regard to the establishment of technology-based inequalities between people.

8.8.2 Focus groups and a bottom-up approach to the elite actors' discourses

The last part of the focus groups allowed a bottom-up reflection on the elite actors' discourses. Their views are summarised as follows.

Society's culture and reflections on the elite actors' discourses

Techno-phobic, non-technocratic and traditional character of Greek society

In the focus groups, users argued about 'Greekness' and pointed to identity, mentality and lifestyle characteristics such as dismissiveness and traditionalism. At the same time, they argued about the failure of decision-making in the country to establish appropriate education, training and infrastructure for the Internet. Thus, they referred not only to how decision-making influences society but also how society and decision-making crosscut one another.

Even if the users pointed to the cultural traits of society, they challenged some of the elite actors' discourses. They reflected on their own everyday life contexts and acknowledged the importance of 'utility', traditions and offline ways of communication and work. Therefore, they seemed to be carriers of some of the cultural characteristics that the elite actors questioned, positioning such characteristics in an everyday context.

This kind of challenge and contextualisation was more obvious in the groups of non-users. These groups admitted the dismissive character of Greek society, disentangling dismissiveness on the grounds of the particularities of everyday life, media propaganda, lack of awareness, over-protectionism of the Greek family and concerns about online risks. Thus, they went beyond popular generalisations of the idea of 'Greek distinctiveness', framing this idea in a life context.

Lack of awareness in Greek society

A discrepancy between enthusiastic and reluctant users was observed when discourses concerning lack of awareness in Greek society were discussed. Enthusiastic users accepted the existence of ignorance and a lack of awareness in Greek society, arguing about 'individual responsibility'. Reluctant users argued about the role of the state and public education in informing the public about Internet matters.

On the other hand, non-users challenged the elite actors' discourses, examining the liability of media, education and state factors for the lack of social awareness and knowledge. Indications of resistance to the Internet were identified in the words of non-users who questioned whether the efforts for more public awareness should and could bring about higher Internet adoption rates in the country.

Hence, ordinary people problematised the elite actors' discourses. They viewed instances of social ignorance as relative and highly dependent on their life worlds and other parameters that mediate how people engage with new technologies.

Social inactivity

Closely related to the above arguments were the focus groups' reflections on the elite actors' discourses about social inactivity and lack of social organisation in Greece. Although non-users did not completely deny the existence of inactivity in Greek society, they emphasised the state's liability as well as the conditions that determine people's interests and priorities in life, making particular reference to 'identity', everyday schedules and traditions to be maintained.

In the same spirit, most users questioned individual responsibility and viewed the notion of citizenship as influenced by state policies as well as by life priorities and circumstances. Thus, they brought up everyday life conditions and decision-making practices, factors which the elite actors did not consider, as they viewed issues of citizenship and social inactivity as coming from and resulting in society.

Decision-making and reflections on the elite actors' discourses

Failure of Greek authorities to adopt EU Internet policies and regulations

Both elite actors and ordinary people judged European policies and regulations on the Internet more positively than the respective national policies and regulations. Also, users and non-users in the focus groups seemed not to trust the Greek state per se.

Whereas elite actors were well informed of regulation in the country, users and non-users in the focus groups did not have sufficient knowledge and awareness to support their arguments. This can explain why most non-users avoided questions concerning policy and regulation, being less familiar with these issues than users.

A non-modernised, delayed, techno-phobic and bureaucratic public administration?

Most users in the focus groups agreed that the public administration in Greece is highly techno-phobic and bureaucratic, drawing mostly on negative views of the public about the public administration. On the other hand, they expressed diverse views about the ways a lack of technocratism and non-modernisation in the public administration influence the diffusion of new technologies. Also, most users were split

between those supporting Greek 'identity' and 'traditions' and those arguing that change is needed. In any case, these views indicate the interdependency between society's culture and politics in Greece, as the public administration influences society in several ways, while it is also shaped by it.

The interdependency between the public administration and society became more obvious when a small number of non-users blamed the authorities and simultaneously considered the people working for the authorities lucky. This reveals that the ways ordinary people position themselves in politics often create contradictory and inconsistent views of authorities and decision-making practices.

More socially accountable policies and regulations needed?

As shown above, users and non-users have strong feelings of mistrust and disappointment about the country's decision-making and authorities. These feelings drove them to offer critiques of how the state and authorities deal with the Internet, whereas mainly non-users lack sufficient knowledge about Internet policy and regulation.

Nevertheless, such feelings of mistrust go hand-in-hand with users' and non-users' desire for more socially accountable policies and regulations, thereby confirming the elite actors' claim that greater social accountability is needed. Users and non-users specified their understanding of social accountability, referring to specific needs they have in life and going beyond the elite actors' relatively abstract position.

High cost, a lack of infrastructure and satisfactory services

Only a small number of users answered questions concerning Internet cost, infrastructure and services. They agreed that the cost of services and networks is higher in Greece than in other European countries, and there are insufficiently developed infrastructure and services in the country. These parameters probably matter for parameters of usage (e.g. quality, breadth etc), but not necessarily for usage itself. This could be explored further if there had been former users in the focus groups who gave feedback on the role of such parameters in their decision to drop out.

On the other hand, non-users stated explicitly they are ignorant of such issues, while they maintained that 'cost' is evaluated subjectively on the basis of people's personal financial status. Thus, they challenged the elite actors' arguments that non-usage derives from high cost, lack of infrastructure and slow market development in the country.

8.9 Concluding remarks: research questions and the way to a synthesis

The focus groups offered qualitative insights into the survey findings and reflected on the elite actors' discourses from the point of view of ordinary people, thereby providing the space for the triangulation of all the different findings. The focus groups departed from a top-down examination (elite actors) and a quantitative approach (survey data) to digital divides. The qualitative insights they offered in relation to the research questions are summarised as follows:

1. *Which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?*

Attitudes to and usage of the media depend on people's circumstances and priorities in life that form subjective and objective parameters of choice. In this respect, work circumstances are particularly important as drivers of usage as well as an area that media activities relate to. Age is the demographic that matters most since it determines people's work duties, hobbies and lifestyles.

A lack of 'need', 'learning' and 'incentives' are the driving forces of Internet non-usage. These parameters are to be seen in an everyday life context because their conception is closely associated with people's everyday lives and priorities in life. Still, these parameters are often related to work and conditions in the workplace. Thus, although people in Greece have generally positive views of the Internet, non-users often consider it a 'burden' or a possibly harmful medium in the context of their lives.

From a user perspective, personal choice and integration of the Internet into everyday life influence significantly breadth of usage, time spent online, online activities, as well as attitudes to the Internet overall. Regardless of the general acceptance of the benefits of the Internet, users who have not integrated it into their lives argued they would not mind if they had to stop using it. Thus, two categories of users were identified in the focus groups: those who use and engage with the Internet willingly; and those who feel forced to use it, limiting their usage significantly. This indicates that the parameter of 'resistance' or 'dismissal' is significant not only for usage *per se* but also for the quality and level of usage. On the other hand, 'resistant' attitudes to the Internet are justified by users on the basis of circumstances, priorities and values in life, which work in two directions: as enablers or forcing factors of Internet usage, on one hand, and as facilitators or obstructing factors of advanced usage and integration of the Internet into everyday activities, on the other.

2. *What is the role of policy- and regulation-making in Greece in the course of the country's information society and with regard to digital divides?*

Non-users have particularly narrow knowledge of Internet policy and regulation. They hold strongly negative views of national policies and regulations,

talking about the 'inefficiency' and 'impotence' of the country's authorities in the context of their everyday lives. However, they have contrasting views about the role of Internet policy and regulation in their decision not to use the Internet. On one hand, they argue that regulation has no role in that decision and refer mostly to a lack of need and desire for Internet use, although they acknowledge the importance of regulation for users' protection. On the other, a significant number of non-users are in favour of 'better' policy, saying that Internet policy can influence to some degree people's decisions not to use the Internet.

Users do not grasp the idea of Internet policy and regulation concretely enough, with those who use the Internet willingly having a better understanding than those who engage less with the Internet. Users mistrust national regulations and the Greek authorities' management of the public interest, although the majority of them accept the general importance of Internet policy and regulation. Only a small number of users have contacted policy and regulatory authorities for help, indicating a lack of awareness of policies and regulations as well as insufficient trust in the authorities. They are in favour of public awareness of Internet regulation and argue for the improved quality, efficiency and public visibility of decision-making on the Internet. However, the debate about citizens' responsibility resulted in divergent views, with advanced users arguing about individual responsibility and less advanced users blaming the authorities for omissions and failures.

3. *How does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?*

Users and non-users highlight certain aspects of the dynamic between society's culture and decision-making. The less advanced users are the less they support regulation, and the more important the Internet is for users' lives the more emphasis they place on the role of policy in usage. Users argue about tangible problems in decision-making that lead them not to trust state policies on the Internet, while they approach these problems on the grounds of their experiences on the Internet as well as in the context of their needs and life circumstances. Although most agree that the public administration in Greece is techno-phobic and bureaucratic, they are split between those in support of Greek 'identity' and 'traditions' and those who argue that change is required. This indicates that the public administration influences society, while also being shaped by it.

On the other side, non-users acknowledge the need for Internet regulation in specific instances of Internet usage, but assess that role on the grounds of their needs and life priorities if they were users. The interdependency between the public administration and civil society became particularly obvious when a small number of non-users in the focus groups accused the authorities in charge, but considered the people working for them as being lucky.

Ordinary people mistrust policy and regulation and this goes hand-in-hand with their desire for more socially accountable policies and regulations. Ordinary people specify how they understand social accountability by referring to specific needs they have in life. Also, users understand social accountability on the grounds of their attitudes to the Internet and their perceptions of Internet risks and opportunities, while non-users are very pessimistic about the prospects of social accountability in policies and regulations.

In Chapter 9, a synthetic discussion of the findings I obtained in all three phases of the research is presented. Chapter 9 discusses the contribution each phase makes to understanding digital divides in Greece and to research in the field. Further, it elaborates on how the findings answer the research questions and the space they provide for the development of alternative understandings of key concepts and theories.

9. Conclusion: Research and theoretical contribution of the work, limitations and prospects for future research

9.1. *Chapter overview*

How do society's culture and Internet policy and regulation influence digital divides in Greece? The thesis has examined this question and this chapter concludes by summarising the main findings. This chapter also discusses the work's research and theoretical contribution, limitations of the research and possible avenues for future work. From a practical viewpoint, it offers policy recommendations to address digital divides in Greece. Section 9.2 compares my findings with other research in the field. Section 9.3 brings the findings together to overview the answers to the operationalised research questions examined in the previous four chapters. Section 9.4 presents how the work approached well-established conceptual frameworks in the field and evaluates the work's contribution to developing key concepts and ideas on digital divides. Finally, Section 9.5 summarises the answers to the principal research questions, points out limitations of the work, highlights some policy recommendations and indicates possible ways to research certain aspects of this PhD project in the future.

9.2. *Digital divides in Greece and elsewhere: the thesis' research contribution*

To evaluate the extent to which the thesis informs other research in the field, this section compares the thesis' findings with insights of other empirical research. This comparison draws on research I briefly introduced in the discussion of digital divides in Chapter 2 and in case-focused discussion in Chapter 3.

9.2.1 *Elite actors' interviews: researching stakeholders' views of digital divides in Greece and elsewhere*

First, I compare the findings from the elite actors' interviews (Chapter 5) with research into stakeholders' views of digital divides outside Greece.

Comparative framework and limitations

The comparative framework consists of research in the UK and Estonia. In the UK, I consider the British Telecom study (2004) that reports on 10 interviews with experts in the field (Chapter 2, p. 33-4). The UK is, like Greece, a long-standing EU

member state but does far better than Greece in most economic, social and technological indicators, whereas Greece is struggling to catch up. Since digital divides in the UK are addressed relatively successfully, questions reaching beyond structural and material resources arise. In Estonia, I consider findings from interviews with stakeholders in that country's information society (Kalkun and Kalvet, 2002) (Chapter 2, p. 31). Estonia is very different from and, at the same time, a similar case to Greece and the UK. Estonia is a new EU member state and has similar socio-economic traits to Greece, whilst its information society performs much better than Greece's and closer to the pace of development in the UK.

This comparative framework can provide useful insights into the main factors influencing digital divisions in different contexts, possibly involving different factors from those of Greece. However, neither the Estonian nor British study considered the views of politicians and regulators, thus lacking insights into the role of decision-making in digital divides. In any case, this is a small comparative attempt and does not reach wide-reaching and generalisable comparative conclusions concerning digital divides from a top-down perspective.

Elite actors conceptualise, explain and predict digital divides: commonsense factors at the epicentre

Conceptualising digital divides beyond access parameters

Experts in the UK (British Telecom, 2004) point to the evolving character of digital divides and argue that access is now less than an issue, although still significant for special interest groups (e.g. elderly, the disabled etc). They argue that, on the contrary, engagement with technology is increasingly important, approaching engagement from a utility and purpose perspective. These arguments are quite close to what the Greek elite actors argued, although the Greek experts mostly emphasised the role of cultural and policy forces in the ways people in Greece access technology and engage with it.

Drivers of digital divides: practical matters, but decision-making left out?

Regarding the reasons for digital exclusion, the British experts argued that digital exclusion is not as tangible and fundamental a problem in Britons' lives as other problems (e.g. unemployment, poverty etc). Similar conclusions were reached by the Estonian stakeholders (Kalkun and Kalvet, 2002), who argued that a lack of motivation due to low living standards is one of the three main barriers to inclusion in the country. Such accounts highlight the role of pragmatic factors, but do not clearly view digital divides as embedded in and closely interconnected with other aspects of social inequality and division. Also, elite actors in the UK and Estonia do not specifically indicate that formal decision-making practices play a role in people's lack of interest in and action against digital exclusion.

On the contrary, my elite actors accounted for the causes of digital divides by sketching a complex web of forces in society and authorities' practices. Also, affordability and other pragmatic factors seem to play a relatively minimal role in digital divides in Greece since, for instance, Greece has higher living standards but lower Internet penetration rates than Estonia (54% in Estonia and 22% in Greece, according to 2008 Eurobarometer data). Thus, the elite actors in Greece mostly highlight the role of traditions in Greek society, and practical issues concerning inadequate related policy-making. Even if the socio-cultural element does come up in the Estonian interviews, this only related to the preference of Estonians to communicate with the public administration through traditional offline means. In a way, cultural forces in Estonia seem to lie in society alone, leaving policy and regulation beyond exploration and being of smaller importance than society's culture in Greece.

The Estonian study argues that the country's non-users lack skills and are unwilling to obtain new skills as they dismiss lifelong learning. The fact that the English language dominates the Internet, the learning efforts required to become familiar with the Internet, hardware cost and accidentally harmful online behaviour all discourage people in Estonia from acquiring Internet skills. In addition, Estonians become discouraged by not having the Internet at home as they are negative regarding use of the Internet from public access points. Although the same sense of unwillingness was identified by the elite actors in Greece, a sense that was called 'techno-phobia', this was not understood as arising from practical matters of learning, language, hardware cost and a lack of private Internet access. My interviewees understood techno-phobia as a feeling of fear that technology generates in traditionally thinking Greek society and which is enforced by inadequate social awareness and socially non-accountable policy and regulation. In this sense, the Estonian study brings up conventional issues of access and learning, whereas my interviews examined the role of decision-making not in determining society's values and attitudes but in reflecting, extending and reinforcing, to some extent, such attitudes and values.

Digital divides and future: A legacy of dystopian and utopian predictions

Emphasis on conventional forces of divides seems to drive some researchers to offer contradictory predictions about the future of digital divides. The UK experts articulated two opposite predictions: first, an optimistic prediction, thinking that design will become user-friendly and that the oldest digitally disadvantaged cohort will be replaced by more engaged age groups; second, a pessimistic prediction based, among others, on market and cost issues. Thus, the UK experts emphasised the role that 'converged, standardised, affordable and user friendly interactive technologies' can play in the shrinking of digital divides in the future (British Telecom, 2004: 18). In my interviews, cost and market issues were touched on, but the focus went beyond design and skills as empirical evidence in Greece and elsewhere has shown that 'difficulty in

use' and 'high cost' concerns are increasingly less important reasons for non-adoption of Internet technologies.

Reflections on literature in the field

Research into digital divides seems to drive the discussion of the concept of 'divide' forward. The studies compared in this section are in tune with the tendency of recent literature to move the discussion beyond access and usage issues and to instead emphasise matters of technology engagement and integration. This also occurred in my interviews as elite actors in Greece pointed to the Internet's importance as a tool or medium of everyday activity.

Regarding the drivers of divides, research in other countries seems to still emphasise conventional drivers, with particular emphasis on affordability, learning, language and access issues. Although these issues were also partly touched on in my interviews, they were seen as being of secondary importance, thus responding to the growing need to extend the examination beyond pragmatic matters. The focus on conventional drivers of divides carries with it the burden of the ongoing battle between dystopian and utopian accounts of the future of divides. Such accounts hold no value for this thesis since I argue that the complex picture of drivers of digital divides makes the future of the phenomenon not easy to predict.

Findings and research contribution of the thesis

Before accounting for the thesis' research contribution, it is important to note the different focus and issues of interest various studies examine in different contexts. This divergence and/or diversity can be explained by the particularities of country contexts and by the different research objectives of each study.

Limitations are present in most research that reports on elite actors' perspectives of digital divides. Political and regulatory authorities are often excluded from research due to the scepticism of researchers about the objectivity and credibility of those who are often thought of as being distant from society and liable for omissions and drawbacks in the information society. Thus, some aspects of my research can hardly be seen within the spectrum of other research in the field, entailing certain lessons for future research and for the originality of the present research.

My interviews with elite actors examined the significance of frequently intangible elements of social and political reality to explain digital divides and estimate their future course. Whereas elite actors in other countries account for digital divides largely by referring to learning and affordability issues, my research positions society's culture and decision-making at the centre of elite actors' discourses, in particular allowing policy-makers and regulators to develop a self-reflexive account of decision-making in the Greek information society.

9.2.2 *Survey of ordinary people: quantitative patterns of ordinary people's adoption of and attitudes to the Internet*

In order to evaluate the survey's contribution (Chapters 6 and 7) to the quantitative study of hardly quantifiable factors, such as society's culture and decision-making, I review its findings from a comparative perspective.

Comparative framework and limitations

Although a huge volume of survey research exists in this field, I only seek to draw on some examples of other surveys so as to point to national/contextual variations along with possible methodological and research issues of interest. Thus, I selected surveys with a certain thematic proximity to my work, while they present regional or contextual insights of interest to the thesis.

First, I discuss the Eurobarometer (EB) E-Communications Household 2008 survey (Chapter 3, pp. 64-5) that positions Greece in the European context, allowing the comparison of my survey findings to those obtained at the EU level. Second, the case of the UK and the OxIS survey (Chapter 2, p. 35-6) provide space for a more focused discussion of national differences relative to the North-South divide argument in related research. Third, I look at cases outside Europe, such as from America and Australia, and examine Pew Internet surveys (see Chapter 2, p. 36) and the Australian Bureau of Statistics (see Chapter 2, p. 30) survey since these surveys explore ICT use in two developed countries that appear to be very different from Greece.

Internet use and reasons for non-use: everyday life and decision-making aside?

Greece and the 'others': Greece lagging behind

The EB survey (EC, 2008a: 54) reports that 42% of households in the EU-27 had Internet access at home in 2007, with Greece (19%) being the old member state with the lowest Internet access and only being higher than the new members Slovakia (18%), Bulgaria (14%) and Romania (12%). Although this percentage is lower than what I found in my survey,¹³⁶ the figures for 2008 confirm the slow change of Internet penetration in Greece over the last few years. In 2008, EU-27 Internet access was 49% (+7), whereas in Greece there was a smaller increase than the EU-27 average from 19% in 2007 to 22% in 2008 (+3). This placed Greece at the very bottom of the EU-27 Internet access list, together with Bulgaria (22%) (ibid).

¹³⁶ As explained in Chapter 6, this is due to the urban scope of my survey. Although my statistics do not typify Greece as a whole, I refer to 'Greece' in general. I do not repeatedly remind the reader of the regional scope of the survey, except where this regional limitation is important for the discussion.

The slow change in Greece is also illustrated when comparing with countries which have reached a plateau in Internet penetration, like the UK and USA. The UK has experienced a rapid increase of Internet access, with 66% of Britons accessing the Internet in 2007 (Dutton and Helsper, 2007). Even though I looked at urban Greece, I found that household Internet access is 44.4%, which is significantly lower than in Britain. Also, Internet use in Britain was 67% in 2007, while just 44.5% of individuals residing in urban Greece use the Internet (this is still higher than the percentage national surveys report, namely in the 20%-35% range). Outside Europe, in 2006 the Pew Internet survey (Madden, 2006) found that Internet penetration in the USA is about 73%, namely twice as much as most surveys report for Greece and far higher than what I found (44.5%). Penetration in the USA is close to penetration in the EU-27 and even closer to that in Britain. On the other hand, in 2005 there was a significant increase in the Internet population in the USA (Rainie, et al., 2005), whereas in countries such as the UK (Dutton and Helsper, 2007) and Greece there has been a slowdown in numbers of new users in the last few years.

Finally, although Australia is a country of a different size and socio-cultural texture than European countries, figures reported by the Australian Bureau of Statistics (2006) are much higher than what I found in Greece and far closer to numbers for the EU and UK, confirming that Greece is lagging behind.

Non-use and factors beyond access and training

As far as non-use is concerned, the main reasons for Internet non-usage in Britain (Dutton and Helsper, 2007) relate to literacy (e.g. training, knowledge etc) and access (e.g. lack of computer availability). A lack of interest is quite an important factor in the UK as well, while my survey found that the big majority of non-users in Greece do not use the Internet because they lack need (63%) and interest (43%). On the other hand, in Australia the chief reasons for a lack of home Internet access is 'no use for the Internet' (24%), 'lack of interest in the Internet' (23%) and 'costs are too high' (19%) (Australian Bureau of Statistics, 2006). It appears that a lack of interest also plays some role in the decisions of Australian households not to have home Internet, but this is much lower than the respective figure in Greece (43%).

These two non-Greek studies seem quite different from the Greek case as the findings in the thesis in particular probe for policies that go beyond access and training provision in order to address issues related to people's interests in everyday life.

Internet adoption and everyday life: conceptual lags and research gaps

As regards the role of everyday life in Internet adoption, the OxIS 2007 concluded that the Internet has become an 'infrastructure of everyday life' (Dutton and Helsper, 8). More specifically, 70% of users in Britain stated the Internet is important or very important to their lives (ibid: 45), while even more users in the USA

(88%) said the same in the 'Internet and Daily Life' survey (Fallows, 2004). In my survey, 64.5% of Greek users think the Internet is a necessary tool in their daily lives, implying that the importance of the Internet for users in Greece is slightly lower than in Britain and the USA. On the other hand, 64% of users in Britain and the USA said that losing access to or stopping Internet use would cause problems in their daily lives. In my survey, 8% less users (56%) think that deprivation of use would influence their lives. Thus and regardless of the strikingly lower Internet penetration rates in Greece compared to Britain and the USA, these results show that general attitudes to the Internet in an everyday life context do not necessarily differ dramatically in countries with varying Internet adoption rates. Nevertheless, one can argue that integration of the Internet into everyday life is still insufficient as many users have not brought the Internet into their lives.

A more recent Pew Internet study (Horrigan and Rainie, 2006) reports on the Internet's integration into people's lives by examining its role in people's major moments of life. This survey is more focused than the Pew 2004 study above and looks at the Internet's role in eight everyday occasions only. Each individual has different priorities in life and, therefore, the perception of a moment or decision, such as the decision of 'buying a car', as 'major' varies not only from person to person but also from culture to culture. Even so, the survey concludes that for most the Internet has not played a big role in any major moment of life. My survey does not address such questions, but illustrates that whereas users in Greece hold generally positive views of the Internet, such views become less positive when specific aspects of everyday life are addressed (e.g. sociability, work, values etc). When comparing with findings in Britain, Greek users appreciate the Internet's role in specific areas of living less than Britons. For instance, 80%-90% of users in Britain do not believe the Internet influences how they spend their leisure time with others, whereas in Greece 41% of users believe the Internet threatens people's sociability.

Going beyond general statements about the Internet's significance, the survey illustrated that online activities and purposes of use depend on and to some extent reflect whether users integrate the Internet into one or more domains of their lives. In the USA, the large majority of users are engaged in information-seeking (92%), communication (85%), everyday transactions (75%) and entertainment activities (69%) on the Internet (Fallows, 2004). In Australia, although the Australian Bureau of Statistics (2006) does not offer specific enough purposes of Internet use, it is striking that 48% of Australians access the Internet for educational purposes and 12% for voluntary or community purposes. These online activities seem to be essentially absent in Greece, as national research has not traced them. On the other hand, in Greece work activities are more popular than in Australia since 48% of Greek users use the Internet at work compared to 31% in Australia. Overall, I found that users in Greece have a narrower scope of activities than users in countries like the USA and Australia:

most are information-seekers (89%) and communicate with others via email (62%), whilst there is little searching for services and online interaction activities. Also, more users in developed countries than in Greece use the Internet for education, everyday transactions and social/community participation, pointing to the Internet's relatively deeper integration into their everyday lives.

Do Internet policy and regulation matter?

Regarding the role of Internet policy and regulation, OxIS 2007 explored people's views of Internet regulation through a relatively limited and fragmentary scope of research (Dutton and Helsper, 2007). OxIS asks about 'government regulation' (ibid: 32), omitting to ask about non-governmental regulations (i.e. Ofcom), EU regulation and self-regulation. Also, it did not connect the role of regulation with indicators or other factors of Internet adoption. In my survey, I posed questions about policy and regulation to users and non-users while I also measured people's opinions, satisfaction and awareness levels, correlating them to demographics and other indicators (see Chapter 7).

OxIS (ibid) finds that 51% of users and 31% of non-users desire government regulation, hypothetically relating this finding to Internet risks. On the contrary, I explored people's satisfaction with and awareness of policy and regulation from more than one perspective, concluding that non-users are less satisfied with and aware of policy and regulation overall. These low figures of satisfaction with and awareness of Internet policy and regulation seem to matter significantly for non-users' limited appreciation of the role Internet use could play in their everyday lives, as tested and illustrated in Chapter 7. At the same time, I found that people's perceived efficiency of national and EU policy and regulation in addressing privacy and security risks online also depends on perceptions of the Internet's role in specific activities and domains of everyday life. What I have concluded is that policy and regulation must be explored from more than one perspective (e.g. efficiency, awareness and social accountability of national and non-national policies and regulations) as they matter when seeking to disentangle people's attitudes to and practices on the Internet, while they are interrelated with everyday life traits and culture.

Reflections on literature in the field

Greece lags behind the rest of Europe, the UK, the USA and Australia in Internet and broadband penetration, being closer to countries with lower socio-economic development.

As regards related literature, the comparative discussion in this section illustrates the particularity of the Greek case, at the same time problematising popular understandings of the terms 'global' and 'European'. Especially the EU is often misleadingly perceived as a unified socio-economic and political entity that drives

policy and research discourses to employ and rely on the conceptual vehicle of the 'European information society'.

Most survey research focuses on Internet use and patterns of use, confirming my argument at various points of the thesis about the absence of research into contextual, everyday and policy or regulatory forces of digital divides. Especially the above Australian survey completely ignores contextual parameters of digital divides in that country. This is precisely the gap that my survey aimed to fill in. On the European and global map, there are regional distinctions which cannot be explained on the grounds of socio-economic and technological factors. My survey goes beyond such factors, positioning the Internet in an everyday and policy framework.

Findings and research contribution of the thesis

The comparative discussion in this section illustrates that findings differ not only due to the different national contexts examined or various objectives pursued in research but also because of the conceptual and research approach taken to explore related concepts and issues.

I argue that the Internet's integration into people's lives cannot be claimed, as in OxIS (p.8), only because the majority of people have Internet access at home. Careful examination of people's attitudes to the Internet and its role in people's lives is needed. In this sense, it is relatively surprising that OxIS poses the same questions about attitudes to users and non-users, whereas some of these questions clearly refer to usage matters that only users could have views about (e.g. 'there is too much immoral material on the Internet', in Dutton and Helsper, 2007: 27).

The examination of everyday life in the Pew studies presents similar problems of conceptualisation and framing. I argue that everyday life should also be looked at from a non-user perspective. The everyday cannot be viewed only as the 'recipient' or 'reflection' of people's decision to use the Internet. It has to be examined as a driving force of people's decisions to use the Internet, as well as a space where offline and online activities intertwine, influencing Internet experiences and the quality of life as a whole. Hence, I have attempted to trace the Internet's role in everyday life as well as the role of everyday life in Internet use and quality of use. Conclusions, such as that by Pew that the Internet is 'an emerging phenomenon, not a mature one' (Haythomthwaite and Wellman, 2002: 31 quoted in Fallows, 2004: 1) must be illustrated more convincingly in research.

This suggestion is valid in relation to policy and regulatory indicators as well. No matter how hard it might be to operationalise such indicators for quantitative research, my approach provides a research example of how policy and regulation can be approached in conjunction with societal indicators and from more than one perspective.

9.2.3 *Focus groups: qualitative examination of ordinary people's insights into digital divides*

In this section, I assess the focus groups' contribution (Chapter 8) to the exploration of the forces of digital divides by comparing the findings to qualitative research in and outside Europe.

Comparative framework and limitations

As before, I selected studies for comparison on the basis of theme- and context-related criteria. I selected five focus groups studies, which may not allow the articulation of any grand or thorough conclusions, but do provide some insights into the research contribution of this research.

First, I select an early study (Haddon, 1999a) that looks at ordinary people's use and perceptions of the Internet in five European countries: Germany, Italy, the Netherlands, Norway and the UK (Chapter 2, p. 38). The oldness of the study and its comparative scope enable me to challenge the assumption that the Internet would be more propagated in Greece of 2007 than in other European countries of the late 1990s. Second, I look at ICT exclusion of single parents and young elderly in the UK (Haddon, 2000) (Chapter 2, p. 35), continuing the examination of the UK case in line with the discussion in the previous two comparative sections. Last, I look at cases outside Europe: American and African. In the USA, I look at ethnographic interviews of 70 Internet users and non-users in 20 family groups (Clark et al., 2004) (Chapter 2, p. 37), which sketch the everyday micrographics of digital divides and, even indirectly, the role of policy-making from the point of view of ordinary people. I also look at a more recent US study (Kvasny 2006) (Chapter 2, p. 36), which explores the role of culture in the digital exclusion of urban populations and employs a sample resembling the sample I used in the focus groups. I complete the analysis with the case of Southern Africa (region of South Africa) and a study on the role of decision-making (Khumalo and Sibanda, 2006) (Chapter 2, p. 37). Although this study involves methodological flaws (e.g. excessively structured topic guides etc), its conclusions help me understand how the Greek case of divides may have similarities to apparently very different cases.

Ordinary people's attitudes to the Internet and driving forces

Does society's culture influence ordinary people's attitudes to the Internet?

The early five-country study (Haddon, 1999a) found that in the late 1990s the Internet had not revolutionised but had a stable position in people's lives, with all five countries having common patterns of Internet adoption. However, in countries where the Internet was integrated into people's lives (e.g. Norway) people perceived it in a mundane way, whereas in countries where people were less familiar with it emotional

perceptions were espoused. The latter category encompasses Greece since in the focus groups enthusiastic users tended to idealise the Internet and most non-users demonised it.

On the other hand, the study on the ICT exclusion of single parents and young elderly in the UK paid more attention to the practical difficulties people encounter when using ICTs. Haddon (2000) found that, even if access is ensured, the quality of usage of ICTs is influenced by economic constraints that diminish not only the functionality of ICT services but also the social and cultural capital that users enjoy. He argued that life circumstances matter for the adoption of new technologies, paying, however, attention to financial and access-related matters rather than the role of existing social and cultural capital in how people take advantage of ICTs.

Outside Europe, an American study (Kvasny, 2006) argued that 'culture is useful for understanding how groups conceptualise, use, and react to ICT' (ibid: 166). This study went beyond cost and access issues, and argued that low-income individuals in urban areas embrace ICTs, considering them empowering tools in life. Clark et al. (2004) provide stronger evidence about the role of society's culture in the USA. They bring up the primary role of personal choice and responsibility, with ordinary people arguing that technological determinism, educational benefits from use and experiences of social, economic and technological disparity are less significant matters. Even economically deprived Americans point to economic disadvantage and differential access to economic and cultural capital as matters that do not suffice to blame, for instance, political authorities. On the other hand, society's culture seems to be even more important for cases like Southern Africa, as Khumalo and Sibanda (2006) explored the disadvantaged position of women in rural areas and found that strong and very different cultural elements from those in the USA determine digital exclusion in Southern Africa. They found that dominant mindsets and gendered ideologies lie behind inequalities. This African study implies that socially and politically maintained cultures can explain the exclusion of women in rural areas of the country, although it does not dig deeper into this issue.

The findings in the USA strongly contest those for the UK with respect to the drivers of ICT and Internet non-use. The UK and the USA are two developed countries of the West where the information society is doing quite well, but divergence still occurs with respect to the research emphasis placed on the role of society's culture, how this culture is conceptualised, and the varying effects of specific drivers of divides. The findings for the USA also contrast, quite expectedly, with those I reported for Greece and the findings reported by Khumalo and Sibanda for Southern Africa in relation to the traits of society's culture and how culture influences people's attitudes to the Internet.

Although I do not dismiss the findings of non-Greek research, I argue that ICTs are carriers of symbolic and social capital in a way that the length, breadth and

quality of their usage depend on how they are positioned in people's lives and in relation to people's aspired social and cultural capital. This was shown in my focus groups where users and non-users evaluated the Internet differently, depending on their priorities and circumstances of life, and the Internet responses to them. The cultural capital produced by ICTs is appreciated on the grounds of the cultural identity(ies) of the context(s) where ICTs are appropriated. For instance, whereas the five-country study did not identify negative attitudes to the Internet that could drive people to stop using it, several users in my focus groups wished they could drop out.¹³⁷ Also, whereas Kvasny found that people in the USA consider that digital inclusion can fight social exclusion, several users in my focus groups did not observe an improvement in their lives since they became Internet users.

Ordinary people and reasons for non-use

As regards non-use, the five-country study (Haddon, 1999a) argued about a 'lack of need', while it looked at busy daily schedules as a concern that people have when going online. Likewise, in the qualitative study of ICT exclusion in the UK (Haddon, 2000), single parents and young elderly argued they do not need new ICTs, although both groups faced practical and other restrictions to usage. For instance, past biographies influenced the young elderly and made them feel incompetent to use new ICTs and have a non-consumerist logic that drove them away from gadgets. In my focus groups, non-users' 'lack of need' was coupled with concerns about the Internet's role as a 'burden' and a possibly harmful medium. Beyond arguments of 'no need' and 'self-exclusion', Kvasny (2006) finds that life circumstances, such as start-up time and costs, can pose barriers to ICT usage in the USA, making people feel disadvantaged and excluded. Although these specific barriers did not emerge strongly in my focus groups, I found that everyday life cultures, habits and customs play a major role in people's decisions to use the Internet.

Instances of self-exclusion appear in Greece and in countries like the UK, but the particular everyday life parameters and cultural traits that influence people's decisions to use ICTs differ significantly in the two countries. For example, everyday habits, values, traditions and life priorities influence people's attitudes to ICTs more in Greece and less in the UK. Most people in Greece are dismissive of anything not considered beneficial and easy to integrate without any radical change in the rhythms and customs of life. Also, whereas the five-country study in 1999 does not conclude a radical rejection or uncritical acceptance of the Internet, in 2007 less balanced and more extreme attitudes to the Internet prevailed among ordinary people in Greece.

¹³⁷ The five-country study and my focus groups found that work generates interest in the Internet and that some use the Internet and have Internet access for work purposes only.

Does decision-making matter for non-use and quality of use?

In the ethnographic interviews in the USA (Clark et al., 2004) people of either a high or low income articulated a discourse of individualism. They argued that ownership, access and usage of the Internet are the responsibility of the individual and not political authorities, thus articulating a narrative of self-reliance and priority criteria to talk about their skills and capabilities in using the Internet. Although a similar sense of priority criteria also exists in Greece, my focus groups drew a complex picture of the ways decision-making and people's decisions to adopt the Internet interconnect.

In contrast to the findings of Clark et al., (ibid), users and non-users in my focus groups found themselves distant from market players and decision-makers, without giving in uncritically to the decisions and practices of the latter. Even the small number of Greek Internet users who were content with upcoming trends in the information society did not directly support the corporate logic that treats citizens as consumers, thus justifying their decisions in the context of experiences in their micro-world. Most users in Greece acknowledged the need for more awareness and visibility of policy and regulation, and they viewed a lack of Internet training and public Internet access, as well as the high cost and lack of Internet infrastructure, as problems that stem from policy and regulation in Greece.

In this sense, my findings are closer to the findings reported by Khumalo and Sibanda (2004) for Southern Africa. Khumalo and Sibanda found that, although women evaluate ICTs positively, those in rural areas feel disempowered, discriminated and neglected, as the traditional culture of the country excludes them from decision-making. This African study finding shows that countries with very different socio-economic and policy standards may be similar in cultural respects as the element of traditionalism is present in both Southern Africa and Greece, while the communication channel between policy and citizens is problematic in both countries. On the other hand, 'individual responsibility' is present in the Greek discourses only to some degree and is not as widespread as in the USA. Greek users accept the existence of ignorance and lack of awareness in Greek society and argue about 'individual responsibility' without, however, implying that policy and regulation are then freed of responsibility.

Reflections on literature in the field

In conclusion, one can argue that most qualitative studies look, from the point of view of ordinary people, to some extent at cultural parameters and even less at the role of policy and regulation.

Although the conclusions of different studies for various contexts differ in one way or another, they do highlight that people's perceptions of and attitudes to the

Internet take place in an everyday life context. Circumstances and needs in everyday life seem to be important in general and in different contexts, highlighting the importance of contextualising digital divides and examining the interlinkages between digital and social exclusion. However, the linkages between digital and social inclusion are still often presented in a quite linear and normative way, bringing forward the criticisms I offered in Chapter 2 regarding the literature. Also, some research still considers conventional issues of access, cost and exclusion to be sufficient for mapping out and interpreting people's attitudes to the Internet. Although ethnographic approaches to digital divides are gaining more weight on the research agenda, they often lack sufficiently deep accounts for the general population and beyond concrete issues of research interest.

The focus groups I conducted aimed to provide a relatively complete picture of socio-cultural and decision-making drivers of digital divides, digging deeper into the cultural specificities of individual and collective living. Hence, they provided case-specific insights that may contribute to a rethinking of the gaps observed in the research literature. These gaps concern the lack of thoroughness and depth in examining ordinary people's views of digital divides, and the insufficient research accounts of the interdependencies between society's culture and decision-making practices when examining digital divides.

Findings and research contribution of the thesis

In the focus groups socio-cultural and identity factors strongly emerged, but they do not seem to be that important in other research. For instance, the five-country study (Haddon, 1999a) reached conclusions which were valid in all countries, with only minor and culture-specific differences in usage and perceptions of the Internet being present at the national level. This can be explained by the research and methodological orientation of the study and its time-premature nature or possibly because the cultural element is actually stronger in Greece.

These observations indicate the inclination of Greek users to stop using the Internet. Whereas non-users in Greece have rejected the Internet due to a lack of 'need', 'learning' and 'incentives', a significant number of users feel 'forced' to use the Internet and are negative regarding it due to circumstances, priorities and values in life. This is quite a unique finding as no other research from the bulk of studies I reviewed points to negative attitudes of users. Also, positive accounts of the role of digital inclusion in overcoming other kinds of exclusion, like in Kvasny's study in the USA, are not strongly supported in my focus groups. These positive accounts can be partly explained methodologically since, in Kvasny, the participants were individuals who had willingly decided to undergo ICT training.

9.2.4 *Digital divides in Greece and elsewhere: conclusion and research contribution of the thesis*

As discussed in Chapter 2, research since the 1990s shows that people often have negative feelings about certain technologies. Early studies illustrated that people resist digital or cable TV for aesthetic reasons and for the fear of technology dominating their everyday lives (Silverstone and Haddon, 1996a), while life circumstances have been studied as possible reasons for resistance to new media technologies (Haddon and Silverstone, 1995). Later studies raised the existence of 'digitally dismissive' parts of the population in different geographical and cultural contexts, and in an everyday life framework (UK Online, 2007: 13; Horrigan et al., 2003; Hartmann, 2005: 144-5; Rommes, 2003; Kingsley and Anderson, 1998).

However, insufficient studies examine concrete and historically traced socio-cultural traits as drivers of resistance to new technologies in national and cross-national contexts. For instance, Wyatt et al. (2002) conclude about resistance to the Internet without going into any depth about the driving forces in an everyday context. Even the European P-903 survey in 2000, which argues that non-users' indifference about the Internet can be taken as a passive form of resistance (Mante-Meijer et al., 2001), does not disentangle the parameters underpinning this sense of indifference. On the contrary, the thesis reaches conclusions about the underlying causes of people's resistance to Internet technologies at the national level of study. It empirically explores and extends the argument that contextual indicators are to be taken into consideration for a systematic account of the forces that influence digital divides and people's engagement with technology (Selwyn, 2004a). In a way, it explores arguments that social and cultural capital (ibid) along with the political agenda in the field (Selwyn, 2005) determine people's decisions not to use and/or to engage with technologies like the Internet.

Hence, the thesis explains aspects of digital divides in Greece that relate to Internet adoption (e.g. Internet use, quality of use, online risks, self-protection on the Internet etc), providing an account of the dialogue between decision-making and society's culture in the country. It attempts to bridge the research gap between society and decision-making and to provide an alternative account of decision-making as highly interdependent on ordinary people's everyday life and culture, presenting the Greek case as a case in its own right and a case that can provide useful insights for other research in the field.

9.3 *Role of society's culture and decision-making in the Greek case of digital divides: recapitulation and synthesis of empirical findings*

How does the thesis' research contribution feed the research questions posed at the beginning? The principal questions were introduced in Chapter 1 (p. 10), broken down into a series of research questions in Chapter 2 (p. 61) and operationalised in Chapter 4 (Table 4-1). Only the first principal research question, '*What are the general characteristics of the Greek information society?*', was not operationalised because it introduced the research. This question was examined in the elite actors' interviews only as the elite actors provided an overview of the Greek information society.

This section recapitulates and provides a synthesis of the findings for each operationalised research question. The answers to the principal research questions are summarised in the concluding section of the chapter.

9.3.1 *What are the general characteristics of the Greek information society?*

Introducing the research, the interviews with elite actors mapped out the most prominent characteristics of the Greek information society. They highlighted a wide range of issues but, for the purpose of this summarising discussion, I focus on the key thematic patterns and arguments of the interviews.

The elite actors approached the Greek information society from a socio-cultural and decision-making perspective. They underlined the overarching role of culture in the Greek information society and highlighted the role of 'techno-phobia' in society and the public administration as the main force of the low Internet adoption in Greece. Thus, they confirmed to a degree the conceptual framework of the thesis and the distinctiveness of the Greek case vis-à-vis other countries, as also shown in Section 9.2.1. They suggested more socially-accountable policies and awareness-raising initiatives, while pointing out the critical role sufficient regulation could play in boosting the Internet, thus criticising Greece's delays in implementing EU regulation.

As regards commonsense drivers, they argued that pragmatic factors such as infrastructure, Internet services, cost, social action and institutional organisation influence Internet adoption although they are interconnected with society's culture and decision-making in the country. Also, they noted other factors that interact variously with society and decision-making and which complete the picture of the complexity of digital divides in the country: market liberalisation and development, media propaganda, and IT education. These forces were discussed as structures lying in between decision-making and society, with the elite actors problematising their role in digital divides. These arguments contributed to the thesis' knowledge base as such

structural factors and their ambiguous role were not highlighted in its conceptual framework.

9.3.2 *How far does society's culture influence digital divides in Greece?*

After mapping out the general traits of the Greek information society, I collected data that provided more concrete evidence of the socio-cultural forces shaping the country's digital divides. This domain was explored in all three phases of research to answer the research question *'what are the cultural and everyday life settings of ordinary people in Greece of relevance to and importance for the course of the Greek information society?'*

In the first phase, the operationalised question 'what are the cultural characteristics of Greek society of past and current times?' was explored from the point of view of elite actors. Most of them argued about the existence of a cultural identity that drives Greece to maintain a traditional lifestyle and dissociates it from the increasingly powerful world of new technologies. They considered that this cultural identity consists of a non-technocratic and techno-phobic culture in society, social ignorance, and the Greek lifestyle in general. Their arguments touched upon citizenship issues as they argued that Greek people behave more like individuals and less like citizens. Although they brought the cultural element to the front more than stakeholders in other countries (see Section 9.2.1), they often held divergent views, using, for instance, contrasting evidence about technologies that Greek people accept enthusiastically (e.g. mobile telephony) to dismiss the argument of 'Greek distinctiveness'.

Concerning the particular cultural elements of the Greek information society, the elite actors answered the operationalised question: 'more specifically, how do the cultural characteristics of Greek society take shape in the Greek information society?'. Regardless of the different institutional and professional interests that the elite actors represented, they underlined the role of 'techno-phobic' and 'non-technocratic' culture, and argued that this culture is dominant in Greek society. Whereas 'technophobia' is a loaded term and was used persistently in my elite actors' interviews, studies of stakeholders' views in other countries point relatively mildly to 'excluded' or 'self-excluded' people (see Section 9.2.1). Nonetheless, different elite actors in Greece placed different weight on the forces driving 'techno-phobia', with social ignorance and lack of familiarity, high cost of Internet services, and low quality of Internet services and infrastructure being some of those forces.

Then, a more focused analysis was pursued, with elite actors and ordinary people discussing how the above socio-cultural characteristics and concrete everyday settings of life in Greece influence digital divides. At this point, I explored the

operationalised question: 'which cultural and everyday life settings of Greek people influence digital divides in Greece and in what ways?'

First, the elite actors argued that low awareness, society's negative attitudes to the Internet, lack of social action and institutional organisation along with a lack of familiarity with new technologies are cultural traits which matter for digital divides and are rooted in the historically established techno-phobic culture of Greek society. In a way, they sketched the cultural and everyday life settings that influence digital divides in Greece, confirming historical accounts of Greek society and specifying culture in a way that is hardly encountered in other research literature (see Section 9.2.1).

In the second and third phases of the research, ordinary people were asked about their views of the role of the cultural elements the elite actors had pointed out. The survey showed that, although ordinary people in Greece have generally positive views of the Internet, they are concerned about its role in specific domains of social life. More importantly, a 'dismissive culture' seems to prevail among non-users since they are not interested in the Internet and are highly unlikely to start using the Internet in the future. Users, on the other hand, appeared to suffer from limited Internet literacy, while nearly half of them thought that the prospect of non-use would not affect their lives significantly; a finding that makes the Greek case quite distinctive (see survey comparisons in Section 9.2.2). Hence, the survey highlighted the role of everyday life and resistance culture, partly confirming the hypothesis that the Internet's role in users' everyday lives influences Internet adoption, albeit no direct and one-way associations between everyday life and Internet use were found. In the third phase, the focus groups showed that indicators, such as demographics, cannot be seen out of context as people's views of and attitudes to media depend on circumstances and priorities in life. The focus groups identified users who use the Internet willingly and those who use it because they are forced, with the former integrating the Internet into their everyday lives more than the latter. 'Resistant' or not attitudes to the Internet were justified by users in the focus groups on the grounds of specific circumstances, priorities and values in life, differentiating the Greek case from other countries where users integrate the Internet into their lives (see Section 9.2.3). On the other hand, the focus groups confirmed the survey findings and partly the elite actors' arguments about non-usage as non-users seemed to lack the need, incentives and knowledge to start using the Internet. 'Need', 'learning' and 'incentives' were seen in an everyday life context since the way non-users viewed these parameters was associated with their everyday lives and life priorities. Hence, the focus groups confirmed that everyday and cultural parameters matter more for non-users in Greece than for non-users in other countries, with access barriers to usage and issues of 'exclusion' not being that prominent in Greece (see Section 9.2.3).

However, do ordinary people consider their everyday cultures highly ‘techno-phobic’, as the elite actors argued, or heavily ‘dismissive’, as the survey showed? On one hand, users in the focus groups argued about ‘Greekness’ and pointed to identity, mentality and lifestyle characteristics such as dismissiveness and traditionalism. On the other, they attempted to deconstruct and contextualise the elite actors’ discourses, arguing about the importance of ‘utility’, ‘traditions’ and ‘offline ways of communication and work’. Thus, they bore some of the cultural traits the elite actors questioned, although positioning these characteristics in an everyday context. The focus groups partly challenged the elite actors’ discourses and enriched the survey findings, allowing a reflection on and interpretation of ordinary people’s views, something which is not seen very often in other research (see Section 9.2.3).

9.3.3 *How far do Internet policy and regulation influence digital divides in Greece?*

After exploring the socio-cultural traits of the Greek information society, I obtained some empirical insight into decision-making in the country. All three phases of empirical research explored the research question *‘how is decision-making shaped in Greece and which are its key features of importance for the country’s information society?’*.

First, the elite actors overviewed policy- and regulation-making in Greece and answered the operationalised question: ‘what is the general picture and key features of policy- and regulation-making in Greece?’. They argued that poor co-operation, bureaucracy, a lack of modernisation and techno-phobia dominate the Greek public sector and country’s decision-making. Some elite actors, especially those operating as a communication channel between citizens and authorities, argued that the alternatives of self-regulation and co-regulation are hindered in Greece due to a lack of social organisation and political inactivity on one hand, and because of a conflict of interests on the other.

Second, the elite actors specifically accounted for the way(s) policy and regulation take shape in the Greek information society, answering the operationalised question: ‘more specifically, how does policy- and regulation-making take shape in the Greek information society?’. Most elite actors argued that ordinary people cannot participate in decision-making due to a lack of social organisation, a techno-phobic culture and a lack of citizenship. They supported a top-down direction of decision-making, with official authorities being the driving forces, while only a few elite actors mentioned public consultations as the way for change to come from grassroots. On the other hand, they stressed that socially accountable policy and regulation should be in place for the traditional and non-technocratic character of Greek society to change.

Third, all three phases of research explored the operationalised question: ‘what is the role of policy- and regulation-making in Greece in the course of the country’s

information society and with regard to digital divides?'. In the elite actors' interviews, politicians, regulators and researchers argued about political liability for the 'technophobia' and 'non-technocratic' culture in society, being critical of practices and mindsets of decision-making in the country. They emphasised regulatory delays, the existence of a non-technocratic and inefficient public administration, the lack of appropriate regulatory initiatives and inadequate social accountability. These findings are opposed to research literature in other countries where stakeholders highlight practical drivers of divides but policy and regulation factors are left out of consideration (see Section 9.2.1).

Then, the survey I conducted posed many questions about policy and regulation to both users and non-users, measuring their opinions, satisfaction and awareness levels. This contrasts with the relatively limited examination of policy and regulation by survey research in other countries (see Section 9.2.2). The survey found that people in Greece consider EU Internet policy and regulation more efficient than national policy and regulation, supporting, though from a different perspective, the elite actors' critical views of national decision-making. The survey illustrated that most ordinary people evaluate the social accountability of EU and national Internet authorities as low, with the majority of users and even more non-users being unaware of Greek authorities that monitor policies and regulations for users' protection. Also, ordinary people in Greece argue that awareness of Internet policy and regulation is low, with users being less likely to think so. The survey confirmed the elite actors' argument about a lack of social accountability in national policy and regulation, and found low satisfaction of users with national policy and regulation, low awareness of Internet policy and regulation and low awareness of authorities users can contact when at risk. Hence, ordinary people send the message that greater social accountability and visibility of policy and regulation are needed in Greece.

Last, the focus groups illustrated that users and mainly non-users have a limited understanding of what Internet policy and regulation are, with advanced Internet users defining Internet policy and regulation better than 'forced' users or those with limited Internet experiences. Users acknowledged the need for more awareness and visibility of policy and regulation, pointing to tangible problems that Internet policy and decision-making do not address successfully, such as a lack of training and public access, high cost and lack of infrastructure. These tangible issues bring up what the elite actors identified as forces lying in between decision-making and society, although the users approached these forces in the context of their individual experiences, needs and life circumstances. In tune with the survey findings, ordinary people in the focus groups expressed their distrust of national regulations and overall political management of the public interest in Greece. Non-users talked about the 'inefficiency' and 'impotence' of the country's authorities, using these terms in the context of their everyday lives. Also, they acknowledged the need for Internet regulation, but assessed

this need on the grounds of their own requirements and priorities in life if they were users. Thus, the focus groups illustrated that the evaluation of Internet policy and regulation depends on social accountability and awareness parameters, as well as on needs, circumstances and choices in everyday life. Finally, the discussion concerning 'citizenship' and the role of ordinary people in decision-making involved relatively divergent views of advanced users who argued about individual responsibility, and less advanced users who blamed the country's authorities for omissions and failures. This debate problematises the elite actors' argument about a lack of citizenship in Greece and the top-down direction that policy- and regulation-making must take. Hence, although self-reliance and priority criteria also seem to exist in Greece, my focus groups painted a complex picture of the ways decision-making and people's decisions to adopt the Internet interconnect. This picture brings Greece closer to the case of Southern Africa where people (women) feel excluded from decision-making, rather than the USA where individualism and self-reliance prevail (see Section 9.2.3).

9.3.4 How do society's culture and Internet policy and regulation intersect in influencing digital divides in Greece?

After exploring the socio-cultural and decision-making traits of the Greek information society, I shed some light on the dynamic between society's culture and decision-making. All three phases of research examined this domain and answered the research question: *'how does the dynamic between society's culture and decision-making take place in the Greece information society and as far as digital divides are concerned?'*

First, the elite actors answered the operationalised question: 'what are the key parameters of the dynamic between society's culture and decision-making in digital divides in Greece?' The elite actors developed the argument that ordinary people's techno-phobic and resistant culture is linked to decision-making practices. They argued that the interactions between society and decision-making in multiple domains of activity result in a complex web of societal and political factors that drive digital divides in the country. The links between society's culture and decision-making and the influence of the latter on digital divides were, however, approached differently by different elite actors as they treated these forces on the grounds of their professional interests in the information society.

Then, the elite actors and ordinary people offered a more focused account of the interconnections between decision-making and society's culture by exploring the operationalised question: 'how does the dynamic between society's culture and decision-making influence digital divides in Greece? To what extent and in what direction?' Although the elite actors failed to map out the specificities of everyday life that cause people's resistance to the Internet, they argued that the 'resistance' and

'techno-phobia' of Greek society are reflected in the public administration, influencing the rhetoric and practices of decision-making. Whereas stakeholders in other countries account for digital divides by largely referring to learning and affordability issues, my elite actors to some extent developed a self-reflexive account of decision-making in the Greek information society (see Section 9.2.1). Nevertheless, they argued that the solution to digital divides could derive from decision-making initiatives and not from ordinary people. Although they argued that additional forces, such as market development and continuous education, are important for understanding digital divides, they viewed change as stemming from policy and regulation and not from the dynamics of social activity and the mobilisation of ordinary people's citizenship.

From a bottom-up perspective, the survey showed that ordinary people's perceived efficiency of Internet policies and regulations depends on their evaluation of the Internet's role in specific domains of everyday life as well as on other policy indicators, such as perceived social accountability of Internet authorities and awareness of Internet policy and regulation. These findings suggest that policy and regulation should not be viewed on their own, like in research in other countries (see Section 9.2.2), and they invite research to understand the cultural and practical specificities of everyday life that influence people's perceptions and evaluations of policy and regulation. On the other hand, the survey found that policy and regulatory indicators influence Greek people's assessments of the Internet's role in everyday life, except for their decision to use the Internet or not.

Going deeper into the survey findings, the focus groups showed that users' and non-users' mistrust of and disappointment with decision-making, and their desire for more socially accountable policies and regulations on the Internet, derive from and refer back to their needs in everyday life, thus going beyond the elite actors' general references to social accountability. Although non-users argued that regulation has played no role in their decision not to use the Internet and they did not specify how policy may influence such a decision, they acknowledged the importance of regulation for the protection of users and argued for 'better' policy. Also, people in the focus groups viewed societal issues such as social ignorance and awareness as relative and highly dependent not only on individual life worlds but also on other forces, such as the state that mediates the ways in which people deal with new technologies. Most users questioned individual responsibility and viewed the notion of citizenship as influenced by state policies as well as by priorities and circumstances in life. They pointed to the interdependency between society's culture and formal decision-making, indicating that the public administration influences society in several ways, while also being shaped by it. Further, non-users challenged elite actors' argument about a lack of citizenship and social inactivity, arguing that the state is liable for social inactivity and highlighting the importance of identity, everyday schedules and traditions. Hence, the focus groups underlined the complex and dynamic relationship between society's

culture and decision-making in Greece not only by highlighting traditionalism, such as in the research in Southern Africa (see Section 9.2.3), but also by viewing this relationship as highly interactive and on the grounds of people's needs, desires, perceptions and attitudes.

9.4 *Conceptualising society's culture and decision-making for the study of digital divides: theoretical contribution of the thesis*

The conceptual framework of the thesis constituted the basis for the empirical examination of the above research questions and is presented in Chapter 2. In this section, I consider how the thesis complements, adds to, critiques or even contrasts the concepts and theories discussed in Chapter 2. I also present how the thesis informs the literature on the Greek case discussed in Chapter 3. This review of the thesis' theoretical contribution mostly relies on the obtained empirical evidence and is coupled with the critical approach I have taken throughout the work to specific theoretical arguments.

9.4.1 *Concepts and theories in digital divides literature*

The thesis has moved beyond access and usage matters in exploring the 'why' and 'how' of digital divisions in Greece. It has also placed the complex indicators of quality of use (Selwyn, 2004a) and variations in usage (Livingstone and Helsper, 2007) in context so as to explore them systematically. The thesis supports a theorisation of digital divides that emphasises the critical role of socio-cultural and decision-making dynamics in structuring Internet adoption qualitatively and quantitatively. According to this theorisation, a complex set of societal cultures with their gaps and disparities, as well as policy and regulatory mindsets and practices are in a constant dialogue with technology, influencing digital inclusion and participation. However, this theorisation does not provide an exhaustive study framework and its validity might vary from case-study to case-study.

Digital divides from an everyday life perspective

In attempting to build up a conceptual framework that approaches technology from a socio-cultural perspective, I first discussed literature that looks at everyday life and its role in digital divides (Chapter 2, Section 2.4.2).

In that discussion, I argued that Schutz's 'lifeworld' is a useful concept for the thesis. Although Schutz does not deal with outside social relations and hierarchies, his 'lifeworld' concept guided my research beyond micro-scale or family-centred conceptualisations of the

everyday and framed my decision to examine the role of agency (e.g. users and non-users) in shaping the everyday as well as shared meanings and knowledge about issues of interest (e.g. Internet adoption). However, it is unclear whether Schutz's 'lifeworld' allows the researcher to capture the collective or systemic 'lifeworld' in existence. The thesis attempted to empower the agent(s) by approaching them empirically not only as individuals but also as members of a broader system of everyday living. In this sense, I aimed to go beyond Schutz's individual 'lifeworlds', perceiving the latter as situated in a broader 'lifeworld' system where interactions between individual 'lifeworlds' and systemic 'lifeworld' conditions take place.

On the other hand, the evolving nature of the everyday, as argued by Schutz's and de Certeau's idea that the everyday is both oppressive and subversive (1984), questions how one fixes the framework of the everyday at a particular moment in time. I theoretically and empirically dismiss such concerns since the evolving nature of the everyday follows the natural course of human life and history, whilst my empirical work pointed directly to the flaw of viewing individual 'lifeworlds' as dissociated from the broader systemic 'lifeworld'. The Schutzian phenomenology attributes human agency with autonomy from structural conditions and limitations, failing to account for outside forces at work. My empirical work shows that such arguments fall short of balancing the interplay between structure and agency, considering the multifaceted role of technology in users' everyday lifeworlds and identifying the multidimensional influence of external social and power relations. Alternatively, the findings I obtained lead in the direction of theorising everyday life as being systemically contextualised and historically traced, without dismissing its time evolution. In a way, such a theorisation facilitates research viewing digital divides as an element and condition of individual and systemic lifeworld(s) that can be explored by scrutinising the interactions between individual and systemic agent(s) in a continuum of time change and evolution.

Drawing, more specifically, on the insights obtained from the empirical part of the research, one can sufficiently support the need to distinguish between individual and systemic lifeworlds and disentangle their interactions. This need can be supported on the basis of the empirically demonstrated dialogue of everyday life with policy and regulation and in relation to digital divides in Greece. Everyday life was understood in the thesis as embracing and explaining, to some extent, people's resistance to technology, jointly constituting the socio-cultural framework of the research. At the same time, people's everyday lives were presented as consisting of individual habits, priorities, values and life activities (an individual lifeworld), while being either complemented by or juxtaposed with external messages, systemic values and norms as well as collective activities (a systemic lifeworld). The thesis recognised that the interactions between individual and systemic lifeworlds are far from linear and thus not easy to disentangle since individual lifeworlds are regarded as being situated within the broader systemic lifeworld, with multi-directional relationships taking place among individual lifeworlds and between them and the systemic lifeworld. In this complex field of lifeworlds, both individual and systemic conditions seem to have jointly shaped, for instance, Greek people's reflections on the role of everyday life in their decision to adopt the Internet or not. This is so since no independence can be assumed in how individual lifeworlds are shaped and developed while the systemic lifeworld would lack any essence if not populated by individual lifeworlds. In this sense, the decision to use the Internet can be taken to rely to a different

extent on individual or systemic parameters, while in the case of Greece this decision seems to have been significantly influenced by historically inherited 'conditions' of life which have shaped the systemic lifeworld in the country and have influenced people's individual lifeworlds until today. For instance, the focus groups showed there are people who prioritise their individual needs, articulating relatively independently of external factors views of the Internet and how it is to be used. On the other hand, the interviewees showed that individual needs might often be contrasted with systemic norms and requirements, leading to use or non-use of the Internet. Finally, other interviewees showed a complete lack of individual thinking, reproducing historically survived and systemically reinforced discourses about 'Greekness' and the role of 'identity' and 'traditions'.

In general, this framing of everyday life and the interactions between individual and systemic lifeworlds are critically important for one to see where policy and regulation are situated and how they intersect with society's culture and everyday culture in particular. Policy and regulation can broadly be seen as constituents and shaping factors of the systemic lifeworld. At the same time, policy and regulation are affected by other systemic conditions as well as by the potential power of the accumulation of individual lifeworlds, while having a more or less important effect on people's individual lifeworlds. However, given that individual and systemic lifeworlds cannot be seen separately, it is striking to examine how and in what direction policy and regulation influence the shaping of the systemic lifeworld, thus variously interacting with individual lifeworlds. Likewise, it is important to examine how the sum of individual lifeworlds may influence, to a more or less significant extent, what is understood as systemic evolution and change. Through a complex network of relationships and interactions of individual and systemic lifeworlds and by seeing policy and regulation as lying within the structures of systemic lifeworld, one can approach the highly interactive dialogue between everyday life and policy and regulation to understand and explain digital divides.

As regards the Greek case in particular, the findings reported in the thesis confirm that Internet policy and regulation are part of what can be thought of as a systemic lifeworld. Along these terms, policy and regulation have been influenced by other, either historically inherited or newly emerging, elements of the system, constituting a factor of systemic change and maintenance at the same time. Thus, ordinary people think of and familiarise themselves with policy and regulation in the context of their individual lifeworlds and in constant interaction with other elements of the systemic lifeworld. In the context of Greece, people consider policy and regulation non-responsive to individual lifeworlds, while admitting the critical importance of policy and regulation for the conditions of individual lifeworlds and thus for the extent to which the Internet can become an integral part of people's everyday lives. At the same time, elite actors see policy and regulation as part of the systemic lifeworld and consider that certain elements of individual lifeworlds are reflected in the systemic lifeworld in a way that often maintains existing structures and prevents further change and evolution. This complex approach to policy and regulation in relation to people's lifeworlds can only be explained by taking into consideration the interchange and linkages between systemic and individual lifeworld and their role in phenomena such as digital divides. In the case of Greece, these linkages were defined as mentioned above, but they vary from context to context, with historical 'conditions' of life, for instance, being less or more important in different contexts.

Nevertheless, the proposition of understanding everyday life as consisting of individual and systemic lifeworlds and developing or evolving on the basis of the interactions between these two types of lifeworld and at multiple levels of analysis is useful for works looking at digital divides in other national or cultural contexts but from an everyday life perspective.

Concluding the reflections on everyday life literature, the attempt of the EMTEL network to research everyday life in connection with policy-making and beyond the domestication tradition holds some importance for the thesis. This has been one of the first serious research attempts to look at everyday life in a broader policy framework and has paved the way for the literature to argue that people's attitudes vary in different everyday life settings and entail implications for how policy responds to people's adoption of and engagement with ICTs (Preston, 2003b; Preston, 2005). However, this attempt has been theoretically quite weak and empirically relatively deliberate, not fully illustrating the deeply dynamic role of everyday life and policy-making in digital divides. EMTEL adopted a cause-solution scheme when discussing the role of everyday life and policy in ICT adoption, assigning the role of 'cause' to the everyday and that of 'solution' to policy. On the other hand, the thesis has illustrated that ICT adoption should be explored by looking at the interactions between everyday life and decision-making since both constitute part of the 'lifeworld', co-influencing the shaping of the conditions of digital inclusion or exclusion.

Digital divides from a resistance perspective

In attempting to build up a conceptual framework that approaches technology from a socio-cultural perspective, I also reviewed literature that examines resistance to technology and its role in digital divides (Chapter 2, Section 2.4.3).

Many works report on resistance to technology (Breakwell, 1987; Hirschheim and Newman, 1988; Northcott, et al., 1985; Willcocks and Mason, 1987). However, most of them concern particular parts of the population (e.g. children) or specific areas of living (e.g. the workplace) and do not quite touch on the different types of new technologies that Bauer's work does. Thus, I reviewed Bauer's work and particularly his argument that resistance can constitute a form of opposition and a challenging action rather than a diversion from the 'best way'. Although his work has conceptually fed the thesis, I question such a positive view of resistant culture and invite the researcher to place resistance culture in context before any normative judgments are articulated.

My research began with a normative approach to resistance, as resistance was initially approached in relation to the historical context of Greece (Chapter 3). The account of this context and the critical discussion of the historical traits of dismissiveness and resistance in Greece led the thesis to a normative judgement of the role of resistance in the Greek case of digital divides. This initially normative judgement stemmed from the negative tone the thesis gave to the notion of resistance as well as the relatively one-sided or monolithic account it espoused with regard to resistance nuances and effects. In this sense, the starting point for examining the Greek case was not fully freed of normative or value-loaded predispositions. However, the thesis aimed to disentangle the particularities of the concept of resistance by operationalising resistance in empirical terms and finding out what the causes, role and effects of resistance might be in relation to digital divides in particular. Thus, the data collected in the

empirical part of the research and the findings obtained illustrated that a far more colourful and complex picture can be drawn with respect to the notion of resistance, its nuances, driving forces and effects.

More specifically, the case-focused review in Chapter 3 demonstrated that historical legacies have created an individualistic and resistant culture in Greek society which prevents the dissemination of innovations and of technological innovations in particular. This, along with the historical and current picture of policy and regulatory practices in the country, it created quite a gloomy picture which led the research to initially support a critical view of such socio-cultural and political traits. This critical stance was essentially maintained in the elite actors' interviews, with the elite actors arguing about techno-phobia in Greek society and social ignorance. Besides market and other pragmatic constraints on the Greek information society, the elite actors argued about the existence of a highly resistant and techno-phobic society in the country which goes hand-in-hand with social ignorance and is reflected in policy- and regulation-making, with the latter further reinforcing society's culture. Regardless of arguments of political liability and the elite actors' realistic look at the conditions and traits of the Greek information society's evolution, they took a critical approach to society's resistant culture. This is because 'resistance' was taken to be negative and not easy to explain in rational terms and on the basis of commonsense exclusion and other factors that prevent people from using the Internet (e.g. online risks and related evidence).

On the other hand, the survey tested this historically argued existence of a resistant culture in Greek society that was also supported by the elite actors. The survey confirmed Greek society's dismissive attitude to the Internet, while it indicated that resistance can be explained rationally and on the basis of practical reasons or it can be presented as a complex set of attitudes which cannot be explained on the basis of any reasonable argument. Even more importantly, the survey illustrated that the way Greek people evaluate the Internet depends on how they evaluate and the extent to which they are aware of Internet policies and regulations. Besides the fact that this finding points to the responsibility of policy and regulation for the extent to which ordinary people are negative towards the Internet, it also calls one to place resistance in a more complex framework where other systemic factors also matter.

Particularly the insights obtained in the focus groups illustrate the critical role policy and regulation play in how ordinary people in Greece understand and evaluate technologies like the Internet. The focus group participants admitted they are unaware of how the Internet works and how it could be useful to their everyday lives, while pointing to the role of policies, information mechanisms and protection regulatory tools in the field. Besides the specific conclusions reached for the case of Greece, these findings generally problematise normative accounts of resistance, indicating that resistance is to be seen in a broader everyday life framework and on the grounds of the continuous dialogue between individual and systemic lifeworlds. On the other hand, there were those in the focus groups - more typical examples of resistant individuals - who directly admitted their preference for the established order of life and their lack of interest in becoming informed about new innovations or technologies which might improve their lives. This group of people argued about the need to retain the identity of 'Greekness' and the established traditions, without justifying in rational terms their decision not to adopt the Internet or to remain hesitant and unenthusiastic Internet users. This group

of ordinary people can be thought of as an example that can take us back to what the historical analysis of the Greek context showed and what the elite actors argued, justifying, albeit to a limited degree, a critical and even normative judgement of resistance.

Nevertheless, the survey and especially the focus groups showed that resistance generally contains, as a notion and a barrier to Internet adoption, a range of nuances and can take multiple forms which do not allow research to simplistically reject it as an irrational attitude or to uncritically support it as a test bench for technology design, as Bauer argues. As regards Bauer's argument in particular, it should be considered that a significant number of the people examined in the thesis seemed to adopt resistant attitudes to the Internet without actually having tested this technology. That is to say that no safe judgement can be put forward about the causes, purposes and effects of resistance. Also, the weight to be placed on each of these parameters and whether resistance is more or less present in people's decisions to use the Internet or not are matters that this case-focused research cannot safely answer for those looking for generally applicable approaches to resistance. However, scholars in the field should take into consideration the thesis' approach to resistance as historically informed, rationally evaluated or uncritically adopted and thus always to be studied relative to other forces at work. In addition, the thesis leaves open the possibility of how scholars are to face and treat resistance, as it can be a useful indicator for policy-makers, regulators and technology designers to take into account or a barrier to inclusion which is to be overcome through appropriate policy, regulatory and market strategies.

Hence, the critical exploration of Bauer's call to distinguish 'resistance', 'avoidance behaviour' or 'ignorance' allows the thesis to critically view the nature and effects of resistant culture, as well as to understand resistance not only as behaviour (e.g. use or non-use) but also as a complicated sum of attitudes to technological artefacts. Therefore, instead of adopting Bauer's argument that the terms 'technophobia' and 'cyberphobia' are the epitome of 'the clinical eye on resistance to new technology', I suggest that these terms be placed in context before being dismissed or approved. Bauer's argument that terms such as 'technophobia' overlook the specificities of the environment within which resistance takes place is not always the case as the analytical and research means through which one studies 'technophobia' is what places emphasis on the context of resistance or not. Also, although Bauer's argument that resistance signals the mismatch of expectations between technology users and designers can be true, we cannot free society of all charges, blaming designers only. In a way, Bauer adopts a techno-deterministic account to understand resistant culture as, even if design matches perfectly people's expectations, people require motives to test design and these motives very often go beyond technology design.

In concluding this section, one can argue that whether ICTs are or are not culturally neutral (Sawyer and Eschenfelder, 2002) should be understood in context and in a value-neutral way. As far as resistant culture is concerned, I propose that the researcher looks at it by examining the multiple forces lying behind it, but without judging its normative character. In the same terms, the causes, nuances and effects of resistance on digital divides should remain subject to open and in-context examination, and regardless of the case-specific conclusions that research like this may reach.

Digital divides from a decision-making perspective

Lastly, I attempted to build up a conceptual framework that approaches technology from a decision-making perspective (Chapter 2, see Section 2.5). This has been a challenging task as I did not look at any specific aspect of policy and regulation. On one hand, this decision enabled me to address a wide range of decision-making issues in the discussion of digital divides. On the other, it made me vulnerable to criticism concerning the broadness of the research. In order to compensate for the lack of focus, I drew on one conceptual perspective, the sociological perspective, to examine policy and regulation.

Beginning with regulation, I was concerned with how regulation stands in the citizen vs. consumer debate in the information society and the related regulatory failures. The literature has accounted for the failures of regulation to distinguish citizens from consumers and thus to respond appropriately to ordinary people's needs and desires. Likewise, policy literature has argued that policy-making in the information society is not socially accountable and that more user-driven, content-concerned and culture-sensitive policies are needed, in the EU information society for instance. As regards digital divides, there has been an increasingly popular discussion of people's capabilities and 'digital entitlements', with scholars arguing that social needs and cultural differences do not inform media policy, as the latter serves a powerful and uncontrollable market.

Although the thesis does not provide solutions or normative suggestions on how regulation and policy should treat digital divides, it does contribute to the debate. It contributes by illustrating that a sociological approach to the role of regulation and policy in digital divides cannot be restricted to considering the ways decision-makers respond or should respond to societal needs. A sociological approach should also look at how regulation and policy are influenced by societal and cultural traits and norms so that the specificities of decision-making are explored beyond a descriptive analysis of related failures and successes. Hence, the thesis gives some support to international literature that criticises and approaches decision-making from a sociological perspective (Calabrese, 1997; Mattelart, 2003; Stelzer, 2001; May, 2002; Silverstone, 2004), but extends the discussion by highlighting the underlying socio-cultural and other forces which may shape decision-making.

Although CARR research and arguments that cultural studies can be a useful analytical device in examining the dialogue between people's worldviews and decision-making practices (Lodge, et al., 2008) constitute progress, they are subject to two criticisms: first, they do not account for how cultural views influence actual decision-making since they only raise the ways such views are represented by decision-makers; second, even if such arguments constitute progress, they do not involve the study of digital divides. The thesis addresses these two elements that are absent from the work

of CARR, allowing alternative conceptualisations of decision-making in general and in the information society in particular.

9.4.2 *Concepts and theories for the study of the Greek case of divides*

The history of the Greek context in the last two centuries and recent evidence of key traits and trends in the Greek information society shaped the conceptual framework of the Greek case of divides (Chapter 3). Also, the general conceptual framework of the thesis (Chapter 2) contains concepts and arguments that enable a better understanding and explanation of the Greek case of divides.

The historical analysis in Chapter 3 pointed to clientelistic relationships and patronage networks in the Greek political arena under the domination of the state and the establishment of weak and non-autonomous working class organisations. Such patronage networks arguably created a weak and passive civil society, with the latter being marked by strongly personalistic relationships with the country's authorities. This picture was partly supported by the elite actors' interviews as stakeholders in the country confirm that civil society in Greece is passive and individualistic, lacking 'citizenship' and being incapable of driving change. However, the elite actors presented the state not as influencing society but as being influenced by society's culture. They also argued that the state must be more socially accountable and, at the same time, more determined in changing passivity and ignorance in Greek society. On the other hand, ordinary people pointed out the distance between the state and society in Greece. They argued in favour of more socially accountable state policies, highlighting parameters that form the picture of an apparently highly passive and ignorant society in the country, such as everyday life circumstances, traditions, a lack of incentives and lack of learning.

As regards the role of decision-making in development of the Greek information society, the historical analysis in Chapter 3 noted that the dominance of clientelistic and incorporative decision-making in Greece has influenced technological development negatively. The bargain between voters and political parties has made the state subject to successive and frequent governmental changes. This uncertainty has resulted in a lack of professionalism, meritocracy, productivity and stability in the public sector, thus intensifying the ineffectiveness of the gigantic and unstable public administration. The elite actors touched upon a few of these historical characteristics, while emphasising the dominant mindsets and cultures in the public sector rather than the structure and size of the public administration. Thus, they confirmed historical arguments concerning bureaucracy, centralisation, a lack of long-term vision and lack of co-ordination in the country's public sector, while they added the view that the non-technocratic, socially distant and static culture in this sector deters development of the Greek information society. These critiques concerning the incorporation of backward

cultures into the Greek public sector somewhat problematise literature that criticises policy-making in the information society mainly because it serves market interests and ignores society's culture (e.g. Mansell's critical analysis, 2002).

Regarding society's culture, the historical analysis showed that Greek civil society has faced a tremendous difficulty in adopting new ways of living. This has made it difficult for Greek people to integrate new technologies into their everyday lives. The elite actors confirmed these arguments since they feverishly supported the existence of techno-phobia and resistance to new technologies in Greek society. On the other hand, ordinary people dismissed the existence of technophobia in the country, at least as this was blatantly put by elite actors, while they justified Internet non-adoption by placing their attitudes to technology in an everyday life context, where identity, habits, needs, desires and interests all matter. Also, the historical analysis in Chapter 3 presents patriotism and romanticism as dominant traits of Greek society due to the existence of a national identity before any economic, political and cultural institutions were established in the country. It was argued that patriotism and romanticism resulted in the formation of the ambivalent national identity of 'Greekness', which is marked by feelings of superiority and distrust vis-à-vis national institutions. Ordinary people in the focus groups supported this argument as their references to everyday life circumstances and priorities were often coupled with arguments in support of identity and 'Greekness'. At the same time, they mistrust the country's authorities, behaving more like individuals, while they expect that state authorities will respond more adequately to their identity and everyday needs. In a way, this empirical evidence presents Greece as a quite striking case in the international literature. Although literature argues about the embeddedness of technology in socio-cultural contexts (see Ch. 2, Section 2.4.1), it touches more on circumstances in the everyday, as well as on utility and design issues, and less on historical legacies and identity factors that maintain cultures and traditions of resistance among people in specific contexts.

In summary, I argue that the thesis enriches the historical accounts of the Greek context, because: first, it introduces arguments about dominant mindsets and internal processes in decision-making before accounting for the size and quality of decision-making practices in the country; and, second, it introduces everyday life parameters as critical for the disentanglement of identity and culture in Greek society. The following news in Greece earlier in 2008 reflects some of these remarks: after a scandal concerning Internet blogging (blackmailing of politicians by bloggers) and the implications for democracy on the Internet in Greece, the media reacted strongly. Thus, the government decided to regulate to save itself from media criticism, whereas the main opposition party went against this merely for populist reasons and by applying a freedom of expression rhetoric that could attract more voters. Citizens, on

the other hand, were split supporting the party they vote for and identify themselves with.

9.5 Concluding remarks, limitations and avenues for new research

In concluding the thesis, I summarise the answers to the four principal research questions I posed at the beginning.

1. What are the general characteristics of the Greek information society?

The elite actors provided an overview of the Greek information society. Arguments about 'Greek distinctiveness' mainly point to the role of culture, with 'techno-phobia' in society and the public administration being highlighted as the main force explaining low Internet adoption in Greece. Also, issues concerning insufficient infrastructure, a lack of satisfactory online services, the high cost of Internet services and networks, as well as a lack of social action and institutional organisation illustrate the complex role of society, culture and decision-making in the Greek information society. In addition, factors like market liberalisation and development, media propaganda and IT education were seen by the elite actors as playing a negative role in the Greek information society, thus problematising the influence of the structures lying in between society and decision-making on digital divides.

2. How far does society's culture influence digital divides in Greece?

Society's culture explains digital divides in Greece in more than one direction. Everyday life culture and resistance to emerging phenomena and to new technologies in particular play a significant role in how ordinary people in Greece understand, evaluate and adopt Internet technologies. Everyday life and resistance in Greek society are often camouflaged by identity and patriotism forces, while being supported by well-established traditions and more tangible restraints of people's Internet literacy, such as a lack of practical incentives for Internet adoption and insufficient learning. Thus, specific aspects of everyday life and resistant culture in Greek society operate at the level of social perceptions and practices, influencing people's psychological predisposition to Internet technologies as well as the breadth and quality of Internet adoption.

3. How far do Internet policy and regulation influence digital divides in Greece?

Mindsets and practices in policy and regulation are another important indicator to account for digital divides in Greece. Although policy and regulation were looked at separately in my work and regardless of their clearly different role and scope of activities, elite actors and ordinary people positioned policy and regulation in the same context, reaching conclusions which are more or less valid for both domains. More

specifically, decision-making in Greece influences digital divides in both practical and perceptual terms. On one hand, it prevents the even and widespread diffusion of Internet technologies in the country by failing to establish the educational, market and technological conditions required in order for all people to be provided with the same opportunities for Internet adoption. On the other, decision-makers in Greece have failed to keep up with European authorities and to detach themselves from past legacies, being influenced by non-technocratic, bureaucratic and socially non-accountable mindsets and cultures. Thus, decision-making in Greece has failed to not only influence everyday conditions and society's culture but also to draw a clear picture of goals and visions that would make it less vulnerable to external pressures and individualistic interests.

4. *How do society's culture and Internet policy and regulation intersect in influencing digital divides in Greece?*

Although the literature treats decision-making and society's culture as two different research fields, the thesis identified interactions between decision-making and society's culture, articulating a more synthetic and overarching account of digital divides. On one side, decision-makers develop a dialogue with ordinary people which is marked by internal contradictions and inconsistencies. Decision-makers appropriate society's culture in a way that serves their narrow professional interests and does not address societal requests for accountability and visibility in policing and regulating the Internet. At the same time, decision-making is often subject to the demands of populist voices in society, espousing backward practices in the information society and failing to offer educational, technological and market provisions as a response to populism. More importantly, policy and regulation constitute part of a broader system and in Greece not only have they failed to drive change in society but they have also been influenced by the societal traits of traditionalism and techno-phobia that deter Internet adoption. On the other side, I found that ordinary people in Greece dismiss technologies, blaming policy and regulation, whilst they appropriate decision-making mechanisms that serve their individual interests. While people require political change, as well as more visible and accountable policies and regulations, they often turn down policies that put their lifestyles and traditions at risk. At the same time, they distrust national policy and regulatory bodies in Greece, questioning as outsiders the backward policies in the information society but being in favour of such policies when they are members of the country's public sector.

These interactions between decision-making and society's culture in the Greek information society, as reported by stakeholders and ordinary people, allow one to understand not only the underlying reasons behind digital divides in Greece but also the deeply socio-political nature of divides, thus furthering the discourses on

conventional access and usage. This is the most important contribution of the thesis, raising implications for the European information society and the study of its divides.

I will not dedicate more space here to discussing answers to the principal research questions since a more detailed account was provided in Section 9.3. In the remainder of this section I briefly present the thesis' significance and limitations, along with possible avenues for future research.

The thesis is significant for policy and research in the field. First, it provides policy and regulatory bodies, as well as other bodies in the field (e.g. civic organisations, market players etc) with some feedback on the causes of digital divides. Although it does not directly suggest any solutions, as research often does, it highlights the role policy-makers and regulators play in the information society by looking at their contribution not only in fighting digital divides but also reinforcing and regenerating long-standing drivers of such divides. Thus, the findings here point to specific directions that decision-makers in Greece can take so as to shrink digital divides. These directions have two levels: first, the level of internal processes and mechanisms that apply to the country's public sector; second, the level of society and the needs of Greek society for the adoption of Internet technologies. The thesis recommends that these two levels be approached from a practice-based and value-loaded point of view as the country's policy-makers must understand the ideologies, values and mindsets dominating both levels as well as the practices and attitudes of all actors involved. Even more significantly, decision-makers will have to make some decisions about the values and practices they espouse so as to be in a position to address the interdependencies between society and politics and untie this Gordian knot. Before they attempt to advance society as a whole, decision-making bodies in the country should dissociate themselves from past legacies and become independent of long-standing elements of social pressure and the culture of resistance in order to change their own internal culture and mechanisms of operation. As obvious as this might sound, internal and public reaction and the fear of losing authority have made decision-makers not be as decisive and progressive as they should be to efficiently tackle digital and other divides in the country. Thus, apart from securing Internet access for all and providing affordable Internet services, satisfactory infrastructure and sufficient Internet training, decision-makers must emphasise the modernisation and improvement of the public administration's performance, increasing social accountability mechanisms in decision-making and supporting social awareness, learning and participation.

From a cross-national point of view, the thesis did not intend to conduct a comparative study and therefore its relevance to other contexts or countries may vary. Nevertheless, the empirical insights obtained here suggest possible implications and challenges for the rhetoric of a synchronised European information society. As noted

in previous chapters, scholars and practitioners have criticised the vision of a single and evenly developed European information society. However, very little empirical evidence shows both the asynchronous development of the information society in different European regions as well as the forces driving such development and the attention that authorities must thus pay to these forces. This is where the thesis can become useful as it analyses the forces of digital divides in a well-established EU member state, Greece, providing insights for the investigation of the drivers of the different paces of information society development in other European countries.

From a research perspective (see Section 9.2), the thesis aimed to provide a research account of the Greek case of digital divides and to inform other research in the field. Other researchers may be interested in the findings here from an analytical (e.g. concepts to elaborate, criticise or adopt) or comparative (e.g. Greece as a case to compare) perspective. Also, the thesis fills a vacuum in national research because there has literally been no empirical work on the particularities of the Greek context and the ways these particularities influence digital inclusion in the country. Although it may sound overtly ambitious, the thesis attempts to reach beyond national studies where technological indicators are examined narrowly and the question of the 'why' of Internet adoption only describes the current situation and does not identify the reasons underlying adoption.

Also, by virtue of the work's theoretical contribution, as presented in Section 9.4, the thesis adds to and critiques some popular theorisations in the field, proposing alternative conceptualisations of digital divides and highlighting the interrelationships between the actors involved. This could provide the grounds for research to become better informed about other routes for critically reviewing well-established and powerful theoretical schemes in the field. Of course, I do not claim any significant addition to the conceptual equipment employed by key scholars in the field. My theoretical approach instead calls for an understanding of the complexity of interactions between concepts and notions that are often employed in digital divide research.

The thesis' limitations involve the conceptual and empirical tools I employed in the research. More specifically, the core of the thesis has been a difficult task that transgresses conventional accounts of digital divides. Although I cannot judge the success of pursuing this task, the latter may be challenged by more broadly accepted accounts of divides and by the argument that top-down approaches to digital divides cannot be mixed with bottom-up perspectives. Regardless of the popular discourses about the need for social accountability of policy and regulation and the role that ordinary people should and could play in decision-making, these two areas are conventionally studied separately, with researchers asking different questions and setting different objectives for each. In this sense, the thesis has attempted to break

ground, running the risk of getting socio-cultural concepts mixed up with policy discourses and ideologies. Also, the thesis has been limited by the decision to tackle concepts and trends in the area of policy and regulation without focusing on specific policy and regulatory issues. Although this decision allowed me to illustrate the broad and variable role of policy and regulation in digital divides, I have compromised the focus and detail of the discussion of this role. This limitation has been noted by people who have reviewed my work at different stages, while I have tried to justify my decision throughout and on the grounds of the thesis' research objectives.

In addition, the scope of the fieldwork I carried out was relatively limited for largely practical reasons. For instance, the survey's scope was regional (the urban region of Attika) and, although this area contains half the Greek population, the selected sample was not, in principle, representative of the national population. Likewise, I interviewed four focus groups (23 individuals), something that does not necessarily question the number of focus groups *per se* but rather the thoroughness of the analysis and the extent to which I traced all patterns of discourses in the study population. Nevertheless, the mixed three-stage methodology I applied allowed the collection of insights regarding the complex issue of digital divides from more than one perspective, while comparing and cross-validating the multiple data collected throughout the empirical work. This may be regarded as a contribution to relevant research in the field since it illustrates that mixed methodology and the treatment of multiple-source data from a complementarity and triangulation perspective are preferable, especially in comparison with a one-staged and single methodological approach. Although mixed methodology runs the risk of obtaining multiple data allowing incompatible and inconsistent conclusions to be reached, the thesis complemented each type of data with another and made an initial attempt to triangulate all three different data types.

The last limitation might involve my Greek nationality and personal experiences during my long stay in Greece, which have given me quite a subjective picture of the prevalent cultural and policy or regulatory traits of the Greek context. This may have even unintentionally directed the work's key objectives and the parameters I have examined throughout. It is indicative that, at times of self-reflection, I considered the process I adopted to decide which aspects of the Greek context to look at and concluded that it was not as thorough and exhaustive as it could have been. In other words, the selection of which indicators to consider as part of understanding the Greek case of divides has been quite intuitive, even though the significance of these indicators was ultimately illustrated in theoretical and empirical terms.

Regarding avenues for future research, some aspects of the thesis deserve further investigation, while the whole study could inspire new research projects. An immediate priority is the publication of journal articles that draw on various aspects of

the thesis and publication of the whole thesis in book format. Also, I aim to present the work at major conferences involving media and communications, communicating the work's substance to larger audiences in the field. These dissemination initiatives will allow me to reflect on my own work and to consider possibly understudied aspects of it or new research ideas and proposals that might still arise from the work already carried out.

Specifically, going beyond the national scope of the thesis one could point to the significance of future research that looks at citizenship and issues of political exclusion in communications more generally. Especially in the EU context, the vision and rhetoric of the European information society highlight the question of citizenship and inclusion. Citizens' inclusion in decision-making in the European information society is treated as the medium through which policies will be successful as well as the substance of success, opposing neo-liberal ideological schemes that support a market-oriented information society. Thus, one way to extend the research insights here is to explore whether and the extent to which EU policy and regulation for the information society enable the participation of civil society in decision-making. By investigating civil society's role in EU policy and regulation and how this influences the democratic character and efficiency of policy and regulation in relation to the past and present course of citizenship in Europe, significant conclusions could be drawn about the foundations of the European information society and phenomena of exclusion and disparity within it.

At an empirical level, the results of the thesis provide insights into how the national contexts in which digital divides take place differ, with divisions and gaps in the information society evolving, acquiring new meanings and requiring further study of the nuances behind questions of technology access and usage. Although the research's focus is on the Greek case of divides, the empirically founded conclusions could provide useful insights into how issues concerning digital divides may apply similarly or differently to other case studies. Thus, another area for future research would be an examination of the results for the Greek case of divides from a comparative perspective and particularly in relation to other country cases. These might be countries that belong to either the same 'semi-periphery' paradigm as Greece (e.g. Ireland, Portugal) or the developed West (e.g. the UK), and where digital divides are encountered more successfully, raising questions beyond structural and material resources and inequality.

Nevertheless, these possibilities for future research may be considered further, while the completion of the thesis does not mean the closure of this area of study. On the contrary, the end of this journey signals the opening of new areas of and interests for research. How the thesis determines future research will be influenced by how it is

received by relevant audiences and its influence on other research in the field in either Greece or beyond.

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APPENDIX

Appendix 4

4-1 Elite actors' interviews: consent form



Digital divides in Greece: role of society's culture and decision-making from a top-down and bottom-up perspective. Implications for the European Information Society

By agreeing to take part in the interview I demonstrate that I have read the attached document detailing the 'Digital divides in Greece: the role of society's culture and decision-making from a top-down and bottom-up perspective. Implications for the European information society' project and that I am happy to put forward my views as invited by the researcher.

I am aware that my interview will be audio-recorded for the purposes of accuracy and will later be transcribed. I also understand that I will have an opportunity to review my transcript and correct any inaccuracies if necessary.

I understand that the information that I make available will be handled confidentially. In addition, I understand that the transcripts will only be handled by the researcher, who will abide by high standards of confidentiality.

I understand that the final findings of this research will be reported or published for purely academic reasons.

I agree to participate in this study

Name _____

Signature _____

Date _____

4-2 Elite actors' interviews: topic guides

- a. Scoping interviews
 - i. Greek information society in comparison to the information society in the EU
 - ii. ICTs and Internet indicators in Greece: a general evaluation
 - iii. How Greek society responds to digital technologies in general
 - iv. Governmental initiatives and policy-making on the Internet in Greece
 - v. Regulatory processes and the role of public consultations in Greece
 - vi. Evaluation of the implementation of EU telecoms laws in Greece and identification of possible forces hindering the implementation process
 - vii. Future challenges and prospects for the Greek information society

- b. Bottom-up interviews
 - i. Social attitudes to and concerns about the Internet in Greece
 - ii. How ordinary people in Greece evaluate current Internet policy and regulation schemes (level of awareness as a critical parameter)
 - iii. Whether and the extent to which Internet policy and regulation in Greece respond to social needs and concerns
 - iv. Possible areas where further policy provisions and regulatory measures on the Internet are needed

- c. Interviews led by theory
 - i. Evaluation of Greek policies against illegal, harmful and unwanted online content
 - ii. Concerns regarding harmful online content and the ways the society of Greek users deal with security risks on the Internet
 - iii. The extent to which self-regulation is effective in Greece and its potential to replace public control and restrictions over the Internet
 - iv. Evaluation of the workability of self-regulation practices in Greece from a comparative perspective
 - v. Issues and social concerns that Internet policy and regulation in Greece must tackle in the future



April 2006/January 2007

Name & address of household

Dear Mrs...

During April one of our interviewers will be calling your home in connection with a survey of Athens residents on their views about the Internet in Greece.

Your name and number were selected at random from the local population database held by ESYE in combination with matching from the regional telephone directory. We are writing this letter because some people prefer being informed in advance about a request for an interview. When our interviewer calls he or she will request to speak to the member of your household who had the most recent birthday (or who will have the next birthday), that could be either you or another member of your household. This is done to ensure that all opinions are represented in the survey.

The interview should only last about ten minutes. Naturally, all of your responses, or those of another member of your household, will be confidential and your participation is strictly voluntary.

Your participation is greatly appreciated since this is a very important study. If you have any questions, please call me on

Yours sincerely,

Panayiota Tsatsou
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* The main body text of the pre-interview letter was taken from Frey, J.H (1989) (2nd edn.) *Survey Research By Telephone*. Newbury Park, London, New Delhi: Sage Publications

4-4 *Refusal conversion introduction**

'Hello. This is (interviewer's full name) calling from...
Earlier this week you (or someone in your household) declined to be interviewed in a survey of Internet issues. In order for our study to be scientifically correct it is necessary to interview people we select in the sample and call first. We really need your opinion and not someone else's. Thus, it would be better for our survey if you are interviewed. This questionnaire will take only ten minutes and your responses are confidential. Okay?'

IF 'yes', PROCEED WITH THE FIRST QUESTION OF THE QUESTIONNAIRE SHEET
IF S/HE STILL REFUSES:

'If you like, we can discuss the purpose of this study and any questions or concerns you might have with regard to this interview'

IF STILL S/HE REFUSES, YOU TERMINATE THE CALL AS FOLLOWS:

'Sorry to have bothered you. Goodbye'

* The main body text of the refusal conversion introduction was taken from Frey, J.H (1989) (2nd edn.) *Survey Research By Telephone*. Newbury Park, London, New Delhi: Sage Publications

4-5 *Call-back introduction**

'Hello. May I speak to _____ ?

This is (interviewer's full name) calling from... I am calling to conduct the interview with you that we had scheduled for (time) today/tonight.

This is a survey of Athens residents on their views of the Internet. Your responses will be confidential and the interview will take approximately ten minutes. Okay?'

IF 'yes', PROCEED WITH THE FIRST QUESTION OF THE QUESTIONNAIRE SHEET

IF S/HE REFUSES:

'In order for our study to be scientifically correct it is necessary to interview people we select in the sample and call first. We really need your opinion and not someone else's. Thus, it would be better for our survey if you are interviewed. This questionnaire will take only ten minutes and your responses are confidential. Okay?'

IF 'yes', PROCEED WITH THE FIRST QUESTION OF THE QUESTIONNAIRE SHEET

IF STILL S/HE REFUSES:

'If you like, we can discuss the purpose of this study and any questions or concerns you might have with regard to this interview'

IF STILL S/HE REFUSES, YOU TERMINATE THE CALL AS FOLLOWS:

'Sorry to have bothered you. Goodbye'

* The main body text of the call back introduction was taken from Frey, J.H (1989) (2nd edn.) *Survey Research By Telephone*. Newbury Park, London, New Delhi: Sage Publications

4-6 *Questionnaire Introduction (instructions to the interviewer in capital)*

'Hello. This is (interviewer's name) calling from that is conducting a survey which aims to find out what Greeks think about the Internet.

Is this the _____ residence?'

IF WRONG NUMBER, TERMINATE THE CALL BY SAYING 'sorry to have bothered you'.

IF RIGHT NUMBER, CONTINUE AS FOLLOWS

'Early this month a letter describing the survey was sent to your household explaining the study. Did you receive it?'

IF YES, PROCEED WITH REMAINDER OF INTRODUCTION

IF NO, 'I am sorry it did not reach you. The letter was to inform you of this call and the nature of the study' AND PROCEED WITH REMAINDER OF INTRODUCTION

'Your number was selected randomly from ESYE's Athens population list and in combination with the matching of numbers from a local telephony directory. The survey is part of Miss Panayiota Tsatsou's doctoral research at the University of London School of Economics in the UK and aspires to investigate Greek citizens' perceptions of the Internet and patterns of use or non-use, also reporting on citizens' evaluation of the role of Internet policies and regulation.

I need to stress the importance of participation as this survey aims to make an important contribution to the careful examination of how the Internet is positioned within Greek society and in comparison to other countries in Europe, underlining, in particular, the possible implications for policy- and regulation-making

In order to give every person aged over 15 a chance to be interviewed for this study, I need to speak with the person in your household who is 15 years of age or older and who will have the next birthday (or who had the most recent birthday). Are you that person?'

IF 'yes', PROCEED WITH REMAINDER OF INTRODUCTION

IF 'no', YOU SAY 'may I speak with that person?' AND WHEN YOU IDENTIFY THE ELIGIBLE RESPONDENT, REPEAT THE PREVIOUS INTRODUCTION AND THEN PROCEED WITH REMAINDER OF INTRODUCTION

'The interview should take approximately ten minutes of your time.

Please feel free to ask questions at any time and you may withhold your response to any item if you wish. Confidentiality and anonymity are also ensured.

Okay?'

IF THE ANSWER IS 'yes', YOU ASK QUESTION 1.

IF THE ANSWER IS 'no', YOU TRY TO CONVINCING THE INTERVIEWEE BY SAYING THE FOLLOWING

'Your participation is particularly important for us, while another 1,000 people like you have also been invited to participate. The interview will only take a few minutes of your time and in this way you will have the opportunity to make an important contribution to a serious academic survey of critical socio-political importance for the country.

Shall we start now with the first question?'

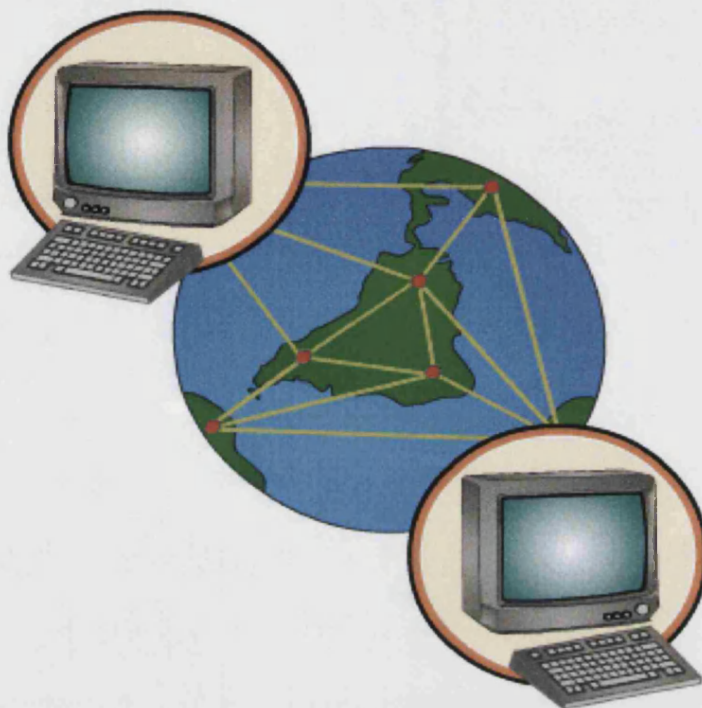
IF 'yes', YOU START WITH QUESTION 1.

IF 'no', YOU CARRY ON AS FOLLOWS

'We respect your wish but we would like to ask for your consent to contact you again at a fixed time'

IF THE INTERVIEWEE GIVES HIS/HER CONSENT TO BE CONTACTED AT A FIXED TIME, YOU PLAN A SECOND CONTACT AS AGREED WITH THE INTERVIEWEE AND YOU FINISH THE PHONE CALL AS FOLLOWS. 'Thank you very much in advance. Goodbye'. CALL-BACKS SHOULD BE INTRODUCED AS IN THE RELEVANT 'CALL-BACK INTRODUCTION' SHEET

IF THE INTERVIEWEE DOESN'T GIVE HIS/HER CONSENT TO BE CONTACTED AT A FIXED TIME, YOU TERMINATE THE CALL SAYING 'sorry to have bothered you. Goodbye' AND YOU PLAN A SECOND AND LAST CALL FOR ANOTHER TIME LATER IN THE WEEK. IN THE SECOND CALL ATTEMPT YOU FOLLOW THE INTRODUCTION GIVEN TO THE RELEVANT 'REFUSAL CONVERSION INTRODUCTION' SHEET



DIGITAL DIVIDES IN GREECE SURVEY

**London School of Economics
Department of Media and Communications
2006-7**

Panayiota Tsatsou, PhD Candidate
Media@LSE, Houghton Street
London, WC2A 2AE, UK

Instructions to the interviewer(s):

1. Only citizens aged over 15 years are eligible to respond.
2. If no one answers the call, ANOTHER 5-6 TELEPHONE CONTACTS AT DIFFERENT TIMES/DAYS SHOULD BE ATTEMPTED.
3. Read each question carefully and all answer categories and CHOOSE ONLY ONE ANSWER unless you are instructed differently next to each question.
4. You NEVER READ OUT the answer category 99 '*Don't know/Refused*'. You only choose this category when the respondent doesn't know the answer to the question or s/he refuses to answer at all.
5. If the answer 99 '*Don't know/Refused*' is given, you choose it and you ALWAYS carry on with the next one question until you finish the questionnaire.
6. You STOP the interview if the answer 99 '*Don't know/Refused*' is given for QUESTION 5. So, if the respondent persistently refuses to say whether s/he uses the Internet or not) you cannot continue the interview.
7. In general, you need to make a lot of effort so that respondents give the answer 99 *know/Refused* as rarely as possible.
8. If questions have MORE THAN 5 ANSWER ALTERNATIVES, you READ THE ALTERNATIVES AGAIN IF NECESSARY.
9. YOU NEVER SKIP ANY QUESTION UNLESS YOU ARE TOLD TO DO SO by instructions given next to a particular question.
10. All INSTRUCTIONS you need to follow are IN CAPITALS and they can be found where they are relevant. They are not to be read out to the respondents. They are only for your assistance.
11. You start the interview from: 'INTRODUCTION' and you finish the interview at: 'FINISH HERE'.

INTRODUCTION (see Appendix 4.5)

Section A: General Questions EVERYBODY ANSWERS SECTION A

'First, I would like to ask a general question about media forms available within your household. So...'

1 **Does your household have...?** PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 Telephone
- 2 T.V
- 3 Radio
- 4 Video game console
- 5 Computer
- 6 Internet
- 7 Nothing of the above
- 8 Other _____ TO SPECIFY
- 99 Don't know/Refused

2 **How often do you watch television programmes on average?** DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Several times a day
- 2 About once a day
- 3 3-5 days a week
- 4 1-2 days a week
- 5 Every few weeks
- 6 Every few months
- 7 Less often
- 99 Don't know/Refused

3 **How often do you read newspapers on average?** DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Several times a day
- 2 About once a day
- 3 3-5 days a week
- 4 1-2 days a week
- 5 Every few weeks
- 6 Every few months
- 7 Less often
- 99 Don't know/Refused

4 **Do you ever use a computer at your workplace, at school, at home, or anywhere else?** DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes
- 2 No
- 99 Don't know/Refused

5 Do you ever go online to access the Internet or World Wide Web or to send and receive email?

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes → CONTINUE ONLY WITH SECTIONS B, D, E, F, G
- 2 No → CONTINUE ONLY WITH F SECTIONS C, D, F, G
- 99 Don't know/Refused → STOP THE INTERVIEW AT THIS POINT

Section B. Computer and Internet Use

ONLY INTERNET USERS ANSWER SECTION B. (CODE 1 FOR QUESTION 5)

'I would now like to ask you some more specific questions about the ways you use the Internet. First of all...'

6 Where do you go online from?

DON'T READ OUT THE ANSWER ALTERNATIVES – PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 Home
- 2 Work
- 3 From a library
- 4 At a community centre
- 5 At an Internet cafe
- 6 At school
- 7 By using a cell phone or other device
- 8 Other _____ TO SPECIFY
- 99 Don't know/Refused

7 Does the computer you use at home connect to the Internet through...?

ONLY THOSE WHO ANSWERED 1 FOR Q.6) ANSWER THIS QUESTION

- 1. Dial-up telephone line → GO TO QUESTION 7.A
- 2. High-speed → GO TO QUESTION 8
- 3. DSL-enabled phone line → GO TO QUESTION 8
- 4. Cable modem → GO TO QUESTION 8
- 5. Wireless connection: land-based or satellite → GO TO QUESTION 8
- 6. T-1 or fibre optic connection → GO TO QUESTION 8
- 7. Other _____ TO SPECIFY → GO TO QUESTION 8
- 99 Don't know/Refused → GO TO QUESTION 8

7.A **Would you like to have a faster, 'broadband' connection at any place you use the Internet, or isn't that something you're interested in?**

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes
- 2 No
- 99 Don't know/Refused

8 **When did you first start going online?**

- 1 Within the last six months → GO TO QUESTION 9
- 2 A year ago → GO TO QUESTION 9
- 3 Two or three years ago or → GO TO QUESTION 9
- 4 More than three years ago → GO TO QUESTION 8.A
- 99 Don't know/Refused → GO TO QUESTION 9

8.A **For about how many years have you had Internet access?**

_____ NUMBER OF YEARS

9 **In general, how often do you go online?**

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Several times a day
- 2 About once a day
- 3 3-5 days a week
- 4 1-2 days a week
- 5 Every few weeks
- 6 Every few months
- 7 Less often
- 99 Don't know/Refused

10 **Next...Please tell me if you ever do any of the following when you go online**

PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 Send or read email
- 2 Get information online
- 3 Play games online
- 4 Chat with people (e.g. chat rooms, MSN, Skype etc)
- 5 Buy a product online, such as books, music, toys or clothing
- 6 Look for work
- 7 Contact public services and administration
- 8 Other _____ TO SPECIFY
- 99 Don't know/Refused

11 **I am going to read you some Internet terms you may or may not be familiar with. As I read each one, please tell me if you have a good idea what the term means, if you aren't really sure what it means or if you have never heard of it.**

DON'T READ OUT THE ANSWER ALTERNATIVES

	Yes, have good idea what the term means	Not really sure what the term means	Never heard of the term	Don't know/refused
a Virus				
b Internet cookies				
c Spyware				
d Adware				
e Internet phishing				
f Spam				

12 Overall, how confident are you that you can keep things like computer viruses, Internet cookies, spyware, adware, Internet phishing and spam emails off your home computer when you want to? Are you very confident, somewhat confident, not too confident, or not at all confident?

DON'T READ OUT THE ANSWER ALTERNATIVES
 ONLY THOSE WHO GO ONLINE FROM HOME (1 FOR Q.6)
 ANSWER THIS QUESTION

1. Very confident
2. Somewhat confident
3. Not too confident
4. Not at all confident
- 99 Don't know/Refused

13 Do you worry about any of the following when you use the Internet?
 PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 Attack from computer viruses
- 2 Internet cookies
- 3 Spyware
- 4 Adware
- 5 Internet phishing
- 6 Spam email
- 7 Other _____ TO SPECIFY
- 8 Don't worry about anything
- 99 Don't know/Refused

14 Have you ever used any tools or technologies for your protection on the Internet, such as anti-virus, firewall, spyware/adware remover, anti-phishing software and spam-killer?

DON'T READ OUT THE ANSWER ALTERNATIVES
 ONLY THOSE WHO GO ONLINE FROM HOME (1 FOR Q.6)
 ANSWER THIS QUESTION

- 1 Yes → GO TO QUESTION 14.A
- 2 No → GO TO QUESTION 15
- 99 Don't know/Refused → GO TO QUESTION 21

14. A Which of the following tools or technologies for your protection on the Internet have you used at least once?

PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 Anti-virus
- 2 Firewall
- 3 Spyware remover
- 4 Adware remover
- 5 Anti-phishing software
- 6 Spam-killer
- 7 Other _____ TO SPECIFY
- 99 Don't know/Refused

15 Why have you never used such tools or technologies?

PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 You don't know what they are for
- 2 You don't know how to install them on the computer
- 3 You don't know how to use them
- 4 You are not convinced that they work
- 5 You are not concerned about security when going online
- 6 They are too expensive
- 7 Other _____ TO SPECIFY
- 99 Don't know/Refused

Section C. Non-Internet Use

ONLY NON-INTERNET USERS ANSWER SECTION C. (CODE 2 FOR QUESTION 5)

'I would now like to ask you some more specific questions about the fact that you don't use the Internet. First of all...'

16 What are the reasons you don't use the Internet or email?

PROMPT FOR MORE ANSWERS AS APPROPRIATE

1. You are not interested
2. You don't need it
3. You don't have access
4. It's too difficult/frustrating
5. It's too expensive
6. You don't have the time
7. You are worried about your security on the Internet
8. You are worried about the impact on everyday life/work/human relationships
9. Other _____ TO SPECIFY
- 99 Don't know/Refused

17 Would you like to start using the Internet and email, or isn't that something you're interested in?

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes, interested
- 2 No, not interested
- 99 Don't know/Refused

18 How likely do you think it is, if at all, that you will start using the Internet or email someday?

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Definitely
- 2 Probably
- 3 Probably not
- 4 Definitely not
- 99 Don't know/Refused

19 What do you think about the statement that people sometimes say about the Internet: 'I'm missing out on things because I am not using the Internet and email'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

20 Did you ever at some point use the Internet or email, but have since stopped for some reason?

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes → GO TO QUESTION 20.A
- 2 No → GO TO QUESTION 21
- 99 Don't know/Refused → GO TO QUESTION 21

20. A What are the reasons you stopped using the Internet or email?

PROMPT FOR MORE ANSWERS AS APPROPRIATE

- 1 You are not interested
- 2 You don't need it
- 3 You don't have/lost access
- 4 It's too difficult/frustrating
- 5 It's too expensive
- 6 You don't have the time
- 7 You are worried about your security on the Internet
- 8 You are worried about the impact on everyday life/work/human relationships
- 9 Problems with your Internet connection, such as: shut down, too slow, no longer free, frequent busy signal etc.
- 10 Other _____ TO SPECIFY
- 99 Don't know/Refused

Section D. Perceptions of the Internet

EVERYBODY ANSWERS SECTION D *EXCEPT FOR Q.25 THAT ONLY INTERNET USERS ANSWER

'Now, I am mainly going to read some statements about the Internet and I would like you to tell me what you think about them. So...'

21 What do you think about the statement: 'The Internet is a significant technology that changes positively our lives'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

22 What do you think about the statement: 'The Internet is a necessary tool for people's everyday life'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

23 Think about the routine ways people interact or communicate with one another in their everyday lives, like keeping in touch with friends and family, or sending greetings, cards or invitations. How do you think that the Internet may affect these kinds of activities?

- 1 Very positively
- 2 Positively
- 3 Neither positively nor negatively
- 4 Negatively
- 5 Very negatively
- 99 Don't know/Refused

24 Overall, how much of a role does the Internet play in the way people go about their daily routines and activities?

- 1 A major role
- 2 A relatively major role
- 3 A minor role
- 4 No role at all
- 99 Don't know/Refused

25 If you couldn't use the Internet at all in any phase of your life, how much would this affect your daily routines and activities?
ONLY INTERNET USERS ARE ASKED THIS QUESTION

- 1 A lot
- 2 Some
- 3 A little
- 4 Not at all
- 99 Don't know/Refused

26 What do you think about the statement: 'The Internet is a danger for the security of users in terms of online fraud and violation of privacy'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

27 What do you think about the statement: 'The Internet is a danger for our personal relationships with other people and our social life'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

28 What do you think about the statement: 'The Internet is a technology that might replace the individual worker in the workplace'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

29 What do you think about the statement: 'The Internet is a technology that might jeopardise the moral values and traditions of society'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

Section E: Evaluation/awareness of Policy and Regulation

ONLY INTERNET USERS ANSWER SECTION E. (CODE 1 FOR QUESTION 5)

'I would now like to move to another topic and ask you a few questions about the ways regulation can protect you from risks you may encounter when you use the Internet. So...'

30 How do you feel about the way the policies and laws in the country protect users' security on the Internet? Are you...

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 99 Don't know/Refused

31 How do you feel about the way in which the policies and laws in the country protect users' privacy on the Internet? Are you...

- 1 Very satisfied
- 2 Satisfied
- 3 Neither satisfied nor dissatisfied
- 4 Dissatisfied
- 5 Very dissatisfied
- 99 Don't know/Refused

32 Do you know which authority to contact if you face some problem using the Internet, such as difficulty with use?
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes → GO TO QUESTION 32.A
- 2 No → GO TO QUESTION 33
- 3 Not sure/it depends → GO TO QUESTION 33
- 99 Don't know/Refused → GO TO QUESTION 33

32. A What is that authority?

_____ TO SPECIFY

33 Do you know which authority to contact if you face some security risk on the Internet?
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes → GO TO QUESTION 33.A
- 2 No → GO TO QUESTION 34
- 3 Not sure/it depends → GO TO QUESTION 34
- 99 Don't know/Refused → GO TO QUESTION 34

33. A What is that authority?

_____ TO SPECIFY

34 Do you know which authority to contact if you face some privacy risk on the Internet?
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1. Yes → GO TO QUESTION 34.A
- 2. No → GO TO QUESTION 35
- 3. Not sure/it depends → GO TO QUESTION 35
- 4. Don't know/Refused → GO TO QUESTION 35

34. A What is that authority?

_____ TO SPECIFY

Section F. Evaluation/awareness of Policy and Regulation

EVERYBODY ANSWERS SECTION F

'Now, I am going to read some statements and I would like you to tell me what you think about them. So....'

35 What do you think about the statement: 'the national laws and policies on the Internet can cope with security risks on the Internet'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

36 What do you think about the statement: 'the national laws and policies on the Internet can cope with privacy risks on the Internet'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

37 What do you think about the statement: 'EU laws and policies on the Internet can cope with security risks on the Internet'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

38 What do you think about the statement: 'EU laws and policies on the Internet can cope with privacy risks on the Internet'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

39 What do you think about the statement: 'national regulatory and policy authorities on the Internet don't take citizen's voice on the Internet into account'?

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

40 What do you think about the statement: 'EU regulatory and policy authorities on the Internet don't take citizen's voice on the Internet into account'? Do you...

- 1 Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

41 What do you think about the statement: 'people's awareness of laws and policies on the Internet is low'? Do you...

- 1. Strongly agree
- 2 Agree
- 3 Neither agree nor disagree
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know/Refused

42 However, before today have you heard about Greek authorities monitoring the application of laws and policies on the protection of Internet users?

DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Heard
- 2 Not heard
- 99 Don't know/Refused

Section G. Demographics

SECTION G

EVERYBODY ANSWERS

'Finally, I would like to finish this interview by asking some questions about yourself for statistical purposes'

43 What is your sex?
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Male
- 2 Female
- 99 Don't know/Refused

44 **What is your age?**
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 15-24
- 2 25-39
- 3 40-64
- 4 65-over
- 99 Don't know/Refused

45 **What is the last grade or class you completed at school?**
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 None, or grades 1-8
- 2 High school incomplete (grades 9-11)
- 3 High school graduate
- 4 Business, Technical, or vocational school AFTER high school
- 5 Some college, no 4-year degree
- 6 College graduate (B.S., B.A., or other 4-year degree)
- 7 Postgraduate training/professional school after college (Master's Degree/PhD., Law or Medical school)
- 99 Don't know/Refused

46 **Are you married?**
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes
- 2 No
- 99 Don't know/Refused

47 **Do you have any children?**
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Yes → GO TO QUESTION 48
- 2 No → GO TO QUESTION 49
- 99 Don't know/Refused → GO TO QUESTION 49

48 **How many children?**
_____ TO SPECIFY

49 **Last year, 2005, what was your family income from all sources, before taxes?**
DON'T READ OUT THE ANSWER ALTERNATIVES

- 1 Less than €10,000
- 2 €10,000 to under €20,000
- 3 €20,000 to under €30,000
- 4 €30,000 to under €40,000
- 5 €40,000 to under €50,000
- 6 €50,000 to under €75,000
- 7 €75,000 to under €100,000
- 8 €100,000 or more
- 99 Don't know/Refused

'Are you willing to be re-contacted and interviewed in person at a later stage of the research if necessary?' TICK THE BOX ONLY IF THE RESPONDENT ACCEPTS TO BE INTERVIEWED IN PERSON

'Thank you for taking the time to answer these questions. Your assistance in providing this information is very much appreciated. If there is anything else you would like to tell us about this survey, you are more than welcome to do that'

FINISH HERE

4-8 *Focus groups: thematic guides*

a. Semi-structured guide for groups of Internet users:

- *Media use*
 1. Which media, how often, purposes of use, attitudes to the role and importance of different types of media
- *Internet use*
 1. The Internet and the ways in which it is understood
 2. Patterns of use (how often; activities; purposes of use; reasons for use; concerns during use; ways to deal with concerns etc)
 3. What if deprived of use in the future
 4. Importance of use in daily activities and various aspects of everyday life
 5. What users think about the following views of elite actors with regard to how Greek society treats new technologies and the Internet in particular: technophobia; ignorance and lack of awareness; social inactivity; non-technocratic and traditional character of Greek society
- *Internet regulation and policy*
 1. How is Internet regulation understood; differences between national and EU regulation; importance of regulation for use; areas where regulation is needed; instances where regulatory authorities' help was needed; who people contact if in need; whether more or less regulation is needed; areas of satisfaction/dissatisfaction with Internet regulation
 2. How is Internet policy understood and its differences from regulation; differences between national and EU policy; importance of policy for use; areas where policy is needed; instances where policy authorities' help was needed; where people address themselves if in need; whether more or less policy is needed; areas of satisfaction/dissatisfaction with Internet policy
 3. What do non-users think about the following views of elite actors with regard to the role of regulation and policy in the take up of new technologies and the Internet in Greece: Greek authorities fail to adopt EU regulations and policies on the Internet; Greek public administration is bureaucratic, non-modernised, delayed and technophobic; more socially accountable and human-centred regulations and policies are needed; high cost of services and networks; lack of infrastructure and satisfactory services

b. Semi-structured guide for non-user groups:

- *Media use*

1. Which media, how often, purposes of use and attitudes to the role and importance of different types of media
 - *Non-Internet use*
 1. The Internet and the ways in which it is understood
 2. Reasons for non-use and attitudes to the Internet
 3. Impact of non-use on various aspects of everyday life
 4. Possibility of future use and changes that future use would bring about
 5. What non-users think about the following views of elite actors with regard to how Greek society treats new technologies and the Internet in particular: technophobia; ignorance and lack of awareness; social inactivity; non-technocratic and traditional character of Greek society
 - *Internet regulation and policy*
 1. How is Internet regulation understood; differences between national and EU regulation; importance of regulation for use; areas where regulation is needed; role of regulation in people's decision not to use the Internet
 2. How is Internet policy understood; differences between national and EU policy; importance of policy for use; areas where policy is needed; role of policy in people's decisions not to use the Internet
 3. What they think about the following views of elite actors with regard to the role of regulation and policy in the take up of new technologies and the Internet in Greece: Greek authorities fail to adopt EU regulations and policies on the Internet; Greek public administration is bureaucratic, non-modernised, delayed and techno-phobic; more socially accountable and human-centred regulations and policies are needed; high cost of services and networks; lack of infrastructure and satisfactory services

Appendix 5

Themes and arguments (codes)

HU: interviews with key actors

File: [C:\Documents and Settings\dan\My Documents\Old computer's documents...\interviews with key-actors.hpr5]

Edited by: Super

Date/Time: 11/11/05 03:47:20

5-1. *The Information society in Greece*

Created: 08/08/05 18:24:49 (Super)

Codes (34): [Distinctiveness of the Greek case] [Cultural distinctiveness of Greek society explaining the low Internet diffusion] [Denial of Greek distinctiveness] [Denial of the role of privacy and security risks on the Internet] [Difficulty in implementation of the information society and regulation in Greece] [Evidence of the unimportance of privacy and security risks: mobile telephony] [Greek information society, policy and regulatory environment] [Greek lifestyle explaining the low Internet diffusion] [High cost in relation to pursued value] [High cost of the Internet in Greece] [High Internet penetration in Greece - an argument of exception] [Importance of integrating the Internet into citizens' daily lives] [Internet as not being part of Greek people's everyday lives] [Internet services not corresponding to citizens' expectations] [Lack of appropriate institutional framework & sufficient resources] [Lack of economy of IT production in Greece] [Lack of infrastructure and/or satisfactory online services] [Lack of IT expertise] [Lack of IT training and education] [Low development of the information society (Internet) in Greece] [Low pursued value of the Internet in Greece] [Low quality of Internet use] [Lower cost of the Internet in other EU countries] [Mobile telephony in juxtaposition to low Internet diffusion] [Need for appropriate conditions in the Greek information society] [Need for more progress and time] [Negative role of the geographical structure and position of Greece] [Negative role of the high cost of Internet services & networks in Greece] [Optimism regarding the future of the Internet] [Partial admittance of the distinctiveness of the Greek case] [Pessimism about the future of the Internet and the information society] [Internet privacy and security issues of critical importance] [Progress achieved] [Role of simple language and non-technocratic terminology]

Quotation(s): 177

5-2 *Cultural drivers in the Greek information society*

Created: 08/08/05 18:45:31 (Super)

Codes (18): [Lack of awareness in Greek society (social ignorance)] [Lack of familiarity with the Internet] [Lack of familiarity with the Internet and in contrast with mobile telephony] [Lack of social action and institutional organisation] [Low awareness in comparison to the EU and other countries] [Need to raise awareness] [Need to understand the great potential and uses of broadband] [Non-technocratic culture (negativism & indifference) of Greek society] [Optimism regarding the potential role of citizens/users in the information society] [Pessimism regarding the potential role of users in regulation-making] [Social dimension of the information society and regulation-making] [Social resistance to change] [Support of the receptive character of

Greek society] [Techno-phobia] [Techno-phobia as the result of online fraud and media propaganda] [Techno-phobia in society] [Techno-phobic culture in society as gradually changing due to policy initiatives] [Techno-phobic culture in Greek society as gradually changing]

Quotation(s): 98

5-3 *EU regulation drivers in the Greek information society*

Created: 08/08/05 00:13:44 (Super)

Codes (18): [Flexible EU policy for the information society] [Applause for EU policy and regulation on the Internet] [Compatibility of the national visions with the EU policies in effect] [Delays of the political and regulatory authorities in Greece] [Difficulty in the implementation of the information society and regulation in Greece] [EU legal action against Greece] [Lack of legal framework for the Internet and broadband] [Limited power of regulation] [Mixture of national and EU policies] [Need for proper economic and regulatory conditions in Greece] [Negative role of the lack of a revised and completed regulatory framework in Greece] [Optimism about the future of the adoption of EU regulation] [Options for states to select the EU policies that suit them] [Policy initiatives in relation to the EU: recognition of nationality] [Progress in the adoption of EU regulation] [Regulatory supervision by the EC] [Significance of (EU) regulation and its full implementation] [The socially beneficial character of EU regulation]

Quotation(s): 90

5-4 *Policy and regulation drivers in Greece*

Created: 08/08/05 18:35:39 (Super)

Codes (37): [Aim of policy initiatives: close to citizens' everyday life] [Bureaucracy] [Correction of past policy mistakes] [Delays of the political and regulatory authorities in Greece] [Efforts for more extroversion] [Ex post evaluation of policies] [Example of current social policies: regional programmes in action] [Horizontal programme on the information society] [Importance of socially-accountable policies in the information society] [Introverted and backward governmental policies in Greece] [Lack of legal framework for the Internet and broadband] [Lack of modernisation in the public administration] [Lack of necessary regulations on security and privacy protection of Internet users in Greece] [Lack of policy co-operation with users' associations] [Limited power of regulation] [More time is needed for socialising policies] [Need for more policy effort and change] [Need for more social policies] [Need for proper economic and regulatory conditions in Greece] [Negative role of the lack of a revised and completed regulatory framework in Greece] [Non-cooperation in the public sector] [Non-technocratic culture (negativism & indifference) of Greek politics] [Non-technocratic culture (negativism & indifference) of the public administration] [Participatory policy-making in the information society] [Past a-social policies] [Past mistake: local particularities not taken into account] [Policies must adjust to everyday life and be comprehensible] [Policy initiatives driven by social needs and concerns] [Policy, regulation and other initiatives] [Political liability] [Political and regulatory delays] [Political and regulatory sufficiency: exceptional argument] [Public consultations] [Risk of a vicious circle] [Self-regulation still lagging behind] [Techno-phobia in the public administration] [Non awareness of political authorities]

Quotation(s): 191

5-5 *Other forces at work*

Created: 08/08/05 18:49:40 (Super)

Codes (7): [Importance of education] [Importance of the market for policy and regulation] [Lack of market competition in Greece/not a single European market] [Lack of market development related to high cost and/or low ICT penetration] [Lack of responsibility and ethical action in the market - state control and other actors still important] [Lack of IT training and education] [Negative role of media propaganda]

Quotation(s): 40

5-6 *Critical reflections*

Created: 08/08/05 18:53:07 (Super)

Codes (9): [Careful approach to the question/neutral answer] [Contradiction] [Difficulty in using socially-oriented language] [Dismissal of survey findings] [Optimism] [Political language used in explaining the Greek information society] [Political language used in how/whether Greece adopts EU regulation] [Political language: progress thanks to the new Greek government] [Proposals]

Quotation(s): 72

Appendix 6

Table A.6-1. Where do you go online from? (%)

			Home	Work	At school	Library	Internet café	Cell phone /other device	Friend's house	Municipal centre	From school
Total			83.5	48.0	10.0	2.5	9.0	1.0	0.7	0.3	0.8
Gender	Male	within Gender	85.3	48.5	9.0	1.5	12.0**	1.9	1.1	0.4	0.4
		within Place	61.0	60.6	58.5	36.4	80.0*	83.3	100	100	33.3
	Female	within Gender	80.6	46.9	9.4	3.9	4.4**	0.6	0	0	1.1
		within Place	39.0	39.4	41.5	63.6	20.0*	16.7	0	0	66.7
Age	15-24	within Age	85.7	8.3**	27.7**	7.5**	21.7**	0.8	0.8	0.8	2.5*
		within Place	27.4	4.7**	82.5**	75.0**	65.0*	16.7	33.3	100	100*
	25-39	within Age	83.6	60.7*	3.0**	1.0**	6.5**	1.0	1.0	0	0*
		within Place	45.2	57.0**	15.0**	16.7**	32.5**	33.3	66.7	0	0*
	40-64	within Age	80.0	68.3**	0.8**	0.8**	0.8**	2.5	0	0	0*
		within Place	25.8	38.3**	2.5**	8.3**	2.5**	50.0	0	0	0*
	65+	within Age	100	0**	0**	0**	0**	0	0	0	0*
		within Place	1.6	0**	0**	0**	0**	0	0	0	0*
Educational	None, or grade 1-8	within Education	66.7*	0**	0**	0	33.3**	33.3**	33.3**	0	0
		within Place	0.5*	0**	0**	0	2.5**	16.7**	33.3**	0	0
	High school incomplete	within Education	85.0*	2.6**	32.5**	2.5	15.4**	0**	0**	0	0
		within Place	9.1*	0.5**	31.0**	9.1	15.0**	0**	0**	0	0
	High school graduate	within Education	81.0*	36.0*	8.0**	3.0	11.0**	0**	0**	1	3
		within Place	21.7*	16.8**	19.0*	27.3	27.5**	0**	0**	100	100
	Business or vocational school	within Education	66.7*	63.0*	11.1**	0	16.7**	0**	1.9**	0	0
		within Place	9.7*	15.9**	14.3**	0	22.5**	0**	33.3**	0	0
	Some college, no 4-year degree	within Education	90.0*	60.0*	12.0**	2.0	0**	0**	0**	0	0
		within Place	12.1*	14.0*	14.3**	9.1	0**	0**	0**	0	0
	College graduate	within Education	85.4*	51.0**	4.0**	3.3	8.6**	0.7**	0.7**	0	0
		within Place	34.6*	36.0*	14.3**	45.5	32.5**	16.7**	33.3**	0	0

	Postgraduate training	within Education	93.6*	72.3**	6.3**	2.1	0**	8.3**	0**	0	0
		within Place	11.8*	15.9**	7.1**	9.1	0**	66.7**	0**	0	0
Income	Less than 10,000 euros	within Income	87.9	37.5**	12.5	0	9.4	3.1	3.1	0	0
		within Place	7.8	5.6**	10.0	0	7.7	20.0	33.3	0	0
	10,000 to 29,999 euros	within Income	87.7	66.3**	2.5	0	2.5	1.3	0	0	0
		within Place	19.0	24.9*	5.0	0	5.1	20.0	0	0	0
	30,000 to 49,999 euros	within Income	85.0	78.9**	0	0	0	0	0	0	0
		within Place	4.6	7.0**	0	0	0	0	0	0	0
	50,000 to 99,999 euros	within Income	100	0**	0	0	0	0	0	0	0
		within Place	0.8	0**	0	0	0	0	0	0	0
Children in household	Yes	within Children	82.5	63.2**	0.7**	0.7*	1.4**	0	0	0	0
		within Place	31.7	42.7**	2.5**	8.3*	5.0**	0	0	0	0
	No	within Children	84.2	40.7*	13.1**	3.4*	12.8**	2.0	1.0	0.3	1.0
		within Place	67.2	56.8**	97.5**	83.3*	95.0*	100	100	100	100

Base: N=Internet users (445). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): home by education= 18.022(a), df= 7; work by age= 114.064(a), df= 3; work by education= 62.390(a), df= 7; work by income= 26.115(a), df= 5; work by children in household= 20.439(a), df= 2; library by age= 14.532(a), df= 3; library by children in household= 8.432(a), df= 2; Internet cafe by gender= 7.566(b), df= 1; Internet cafe by age= 35.511(a), df= 3; Internet cafe by education= 18.486(a), df= 7; Internet cafe by children in household= 15.754(a), df= 2; school by age= 70.214(a), df= 3; school by education= 32.251(a), df= 7; school by children in household= 18.735(a), df= 2; cell phone by education: 44.539(a), df=7; friend's house by education: 50.573(a); df=7; from school by age : 8.274(a), df=3

Table A.6-2-A. Does the computer you use at home connect to the Internet through...? (%)

			Internet connection					Total	
			Dial-up	High-speed	DSL	Cable	Wireless		DK/Refused
Total			46	5.5	44.6	1.1	1.4	1.5	100
Gender	Male	Within Gender	41.9	6.6	48.0	0.9	1.8	0.9	100
		Within connection	55.6	71.4	65.7	50.0	66.7	40.0	60.9
	Female	Within Gender	52.1	4.1	39.0	1.4	1.4	2.1	100
		Within connection	44.4	28.6	34.3	50.0	33.3	60.0	39.1
Age	15-24	Within Age	44.1	2.9	48.0	1.0	2.0	2.0	100
		Within connection	26.5	15.8	29.3	25.0	40.0	33.3	27.5
	25-39	Within Age	46.7	6.6	44.3	1.2	1.2	0	100
		Within connection	45.9	57.9	44.3	50.0	40.0	0	45.0
	40-64	Within Age	46.9	5.2	41.7	1.0	1.0	4.2	100
		Within connection	26.5	26.3	24.0	25.0	20.0	66.7	25.9
	65+	Within Age	33.3	0	66.7	0	0	0	100
		Within connection	1.2	0	2.4	0	0	0	1.6
Education	None, or grades 1-8	Within Education	50.0	0	50.0	0	0	0	100
		Within connection	0.6	0	0.6	0	0	0	0.5
	High school incomplete etc	Within Education	52.9	5.9	35.3	0	0	5.9	100
		Within connection	10.5	10.0	7.2	0	0	33.3	9.1
	High school graduate	Within Education	50.6	4.9	40.7	1.2	2.5	0	100
		Within connection	23.8	20.0	19.9	25.0	40.0	0	21.7
	Business or vocational school	Within Education	38.9	8.3	47.2	2.8	0	2.8	100
		Within connection	8.1	15.0	10.2	25.0	0	16.7	9.7
	Some college, no 4-year degree	Within Education	46.7	8.9	44.4	0	0	0	100
		Within connection	12.2	20.0	12.0	0	0	0	12.1
	College graduate	Within Education	40.6	5.5	48.4	1.6	2.3	1.6	100
		Within connection	30.2	35.0	37.3	50.0	60.0	33.3	34.3
Postgraduate training	Within Education	53.3	0	44.4	0	0	2.2	100	
	within connection	14.0	0	12.0	0	0	16.7	12.1	
Income	Less than 10,000 euros	within Income	51.7**	0**	41.4**	0**	6.9**	0**	100
		within connection	8.8**	0**	7.2**	0**	40.0**	0**	7.8
	10,000 to under 29,999 euros	within Income	45.1**	1.4**	47.9**	1.4**	1.4**	2.8**	100
		within connection	18.7**	5.3**	20.5**	25.0**	20.0**	40.0**	19.2
	30,000 to under 49,999 euros	within Income	43.8**	6.3**	37.5**	6.3**	6.3**	0**	100
		within connection	4.1**	5.3**	3.6**	25.0**	20.0**	0**	4.3
	50,000 to under 99,999 euros	within Income	50.0**	50.0**	0**	0**	0**	0**	100
		within connection	0.6**	5.3**	0**	0**	0**	0**	0.5
100,000 or more euros	within Income	0**	100**	0**	0**	0**	0**	100	
	within connection	0**	5.3**	0**	0**	0**	0**	0.3	
Children in household	Yes	within Children	49.2	4.2	41.5	0.8	0.8	3.4	100
		within connection	33.9	25.0	29.5	25.0	20.0	66.7	31.7
	No	within Children	43.6	6.0	46.8	1.2	1.6	0.8	100
		within connection	63.7	75.0	70.5	75.0	80.0	33.3	67.2

Base: N=372 (Internet users with access from home).

Pearson's Chi-Square (significant correlations): Internet connection by income= 49.188(a), df= 25,

**=significant at p<0.01.

Table A.6-2-B. Would you like to have a faster, 'broadband' connection anywhere that you use the Internet from, or isn't that something you're interested in? (%)

			Desire for broadband			Total
			Yes	No	DK/R efused	
Total			57.8	39.6	2.6	100
Gender	Male	within Gender	61.1	34.7	4.2	100
		within Desire for broadband	58.6	49.3	80.0	55.6
	Female	within Gender	53.9	44.7	1.3	100
		within Desire for broadband	41.4	50.7	20.0	44.4
Age	5-24	within Age	57.8	40.0	2.2	100
		within Desire for broadband	26.5	26.9	25.0	26.6
	25-39	within Age	65.4	32.1	2.6	100
		within Desire for broadband	52.0	37.3	50.0	46.2
	40-64	within Age	47.7	50.0	2.3	100
		within Desire for broadband	21.4	32.8	25.0	26.0
	65+	within Age	0.0	100	0.0	100
		within Desire for broadband	0.0	3.0	0.0	1.2
Education	None, or grades 1-8	within Education	0.0	100	0.0	100
		within Desire for broadband	0.0	1.5	0.0	0.6
	High school incomplete	within Education	38.9	61.1	0.0	100
		Within Desire for broadband	7.1	16.2	0.0	10.5
	High school graduate	Within Education	70.7	29.3	0.0	100
		Within Desire for broadband	29.3	17.6	0.0	24.0
	Business or vocational school	Within Education	64.3	28.6	7.1	100
		within Desire for broadband	9.1	5.9	25.0	8.2
	Some college, no 4-year degree	within Education	66.7	33.3	0.0	100
		within Desire for broadband	14.1	10.3	0.0	12.3
College graduate	within Education	57.7	40.4	1.9	100	
	within Desire for broadband	30.3	30.9	25.0	30.4	
Postgraduate training	within Education	43.5	47.8	8.7	100	
	within Desire for broadband	10.1	16.2	50.0	13.5	
Income	Less than 10,000 euros	within Income	73.3	20.0	6.7	100
		within Desire for broadband	11.2	4.5	20.0	8.8
	10,000 to under 29,999 euros	within Income	43.8	53.1	3.1	100
		within Desire for broadband	14.3	25.4	20.0	18.8
	30,000 to under 49,999 euros	within Income	33.3	66.7	0.0	100
		within Desire for broadband	2.0	6.0	0.0	3.5
50,000 to under 99,999 euros	within Income	0.0	100	0.0	100	
	within Desire for broadband	0.0	1.5	0.0	0.6	
Children in household	Yes	within Children in household	55.2	43.1	1.7	100
		within Desire for broadband	32.3	37.3	25.0	34.1
	No	within Children in household	59.6	37.6	2.8	100
		within Desire for broadband	65.7	61.2	75.0	64.1

Base: N=172 (Internet users with access from home via dial-up).
 Pearson's Chi-Square, = non-significant at $p < 0.01$

Table A.6-3. When did you first start going online? (%)

			Time they first started going online					Total
			Last 6 months	A year ago	2 or 3 years ago	More than three years ago	DK/Refused	
Total			5.8	9.2	24.6	60.2	0.1	100
Gender	Male	within Gender	4.9	7.9	21.8	65.4	0	100
		within Time	50.0	51.2	52.7	64.9	0	59.6
	Female	within Gender	7.2	11.1	28.9	52.2	0.6	100
		within Time	50.0	48.8	47.3	35.1	100	40.4
Age	15-24	within Age	11.8*	12.6*	31.1*	44.5*	0*	100
		within Time	53.8*	36.6*	33.9*	19.7*	0*	26.7
	25-39	within Age	3.5*	8.5*	21.9*	66.2*	0*	100
		within Time	26.9*	41.5*	40.4*	49.4*	0*	45.1
	40-64	within Age	4.2**	7.5*	21.7*	65.8*	0.8*	100
		within Time	19.2*	22.0*	23.9*	29.4*	100*	26.9
	65+	within Age	0*	0*	33.3*	66.7*	0*	100
		within Time	0*	0*	1.8*	1.5*	0*	1.3
Education	None, or grades 1-8	within Education	33.3**	33.3**	0**	33.3**	0**	100
		within Time	4.0**	2.5**	0**	0.4**	0**	0.7
	High school incomplete	within Education	18.4**	21.1**	34.2**	26.3**	0**	100
		within Time	28.0**	20.0*	12.0**	3.7**	0**	8.6
	High school graduate	within Education	7.1**	13.1**	25.3**	54.5**	0**	100
		within Time	28.0**	32.5**	23.1**	20.1**	0**	22.4
	Business or vocational school	within Education	3.8**	9.4**	24.5**	62.3**	0**	100
		within Time	8.0**	12.5**	12.0**	12.3**	0**	12.0
	Some college, no 4-year degree	within Education	4.1**	4.1**	28.6**	63.3**	0**	100
		within Time	8.0**	5.0**	13.0**	11.6**	0**	11.1
	College graduate	within Education	4.0**	5.3**	22.0**	68.0**	0.7**	100
		within Time	24.0**	20.0*	30.6**	38.1**	100**	33.9
Postgraduate training	within Education	0**	6.3**	18.8**	75.0**	0**	100	
	within Time	0**	7.5**	8.3**	13.4**	0**	10.9	
Income	Less than 10,000 euros	within Income	3.0	6.1	30.3**	60.6**		100
		within Time	4.0	4.9	9.2	7.5		7.4
	10,000 to under 29,999 euros	within Income	2.5	8.8	21.3	67.5		100
		within Time	8.0	17.1	15.6	20.2		18.1
	30,000 to under 49,999 euros	within Income	5.3	0	31.6	63.2		100
		within Time	4.0	0	5.5	4.5		4.3
	50,000 to under 99,999 euros	within Income	0	50.0	0	50.0	0	100
		within Time	0	2.4	0	0.4	0	0.5
100,000 or more euros	within Income	0	0	0	100	0	100	
	within Time	0	0	0	0.4	0	0.2	
Children in household	Yes	within Children	2.8	9.7	22.9	64.6	0	100
		within Time	15.4	34.1	30.3	34.7	0	32.4
	No	within Children	7.1	9.1	25.3	58.2	0.3	100
		within Time	80.8	65.9	68.8	64.6	100	66.7

Base: N=445 (Internet users). *=significant at p<0.05, **=significant at p<0.01
 Pearson's Chi-Square (significant correlations): time by age= 25.237(a), df= 12; time by education= 51.038(a), df= 28;

Table A.6-4. In general, how often do you go online? (%)

			Frequency of use									Total	
			Sever al times a day	On ce a day	3-5 day s a wk	1-2 day s a wk	Every few wks	Every few mont hs	Les s oft en	All day lon g	Depe nds on work		DK /Re fuse d
Total			45.6	21.3	17.3	10.7	2.9	0.9	0.5	0.5	0.3	0.1	100
Gen der	Male	within Gender	52.6**	18.0**	14.7**	11.3**	2.6**			0.4**	0.4**		100
		within Frequen cy	69.0*	50.5**	50.6**	62.5**	53.8**			50*	100**		59.6
	Fema le	within Gender	35.0**	26.1**	21.1**	10.0**	3.3**	2.2**	1.1*	0.6**		0.6**	100
		within Frequen cy	31.0**	49.5**	49.4**	37.5**	46.2* *	100**	100**	50.0**		100**	40.4
Age	15-24	within Age	35.0	19.2	20.8	18.3	3.3**	1.7	0.8	0.8			100
		within Frequen cy	20.8	24.5	32.5	45.8	33.3	40.0	33.3	50.0			27.0
	25-39	within Age	47.5	21.0	18.5	7.5	3.0	1.0	1.0	0.5			100
		within Frequen cy	47.0	44.7	48.1	31.3	50.0	40.0	66.7	50.0			44.9
	40- 64	within Age	53.3	22.5	12.5	7.5	1.7	0.8			0.8	0.8	100
		within Frequen cy	31.7	28.7	19.5	18.8	16.7	20.0			100	100	27.0
	65+	within Age	20.0	40.0		40.0							100
		within Frequen cy	0.5	2.1		4.2							1.1
Edu catio n	None , or grade s 1-8	within Educati on			33.3	33.3	33.3						100
		within Frequen cy			1.3	2.1	7.7						0.7
	High scho ol inco mple te	within Educati on	25.6	23.1	15.4	23.1	5.1	5.1	2.6				100
		within Frequen cy	5.0	9.6	7.7	19.1	15.4	40.0	33.3				8.8
	High scho ol gradu ate	within Educati on	39.6	18.8	21.8	15.8	1.0	1.0	1.0			1.0	100
		within Frequen cy	19.9	20.2	28.2	34.0	7.7	20.0	33.3			100	22.7
	Busin ess or vocat ional scho ol	within Educati on	43.4	24.5	18.9	5.7	3.8	1.9			1.9		100
		within Frequen cy	11.4	13.8	12.8	6.4	15.4	20.0			100		11.9
	Some colleg e, no 4- year degre e	within Educati on	50.0	20.0	18.0	6.0	4.0		2.0				100
		within Frequen cy	12.4	10.6	11.5	6.4	15.4		33.3				11.2
Colle	within	48.7	21.3	15.3	9.3	3.3	0.7		1.3			100	

	ge graduate	Education within Frequency	36.3	34.0	29.5	29.8	38.5	20.0			100		33.7	
	Postgraduate training	Education within Frequency	61.7	23.4	12.8	2.1							100	
		Education within Frequency	14.4	11.7	7.7	2.1							10.6	
Income	Less than 10,000	within Income within Frequency	33.3	30.3	15.2	15.2	3.0	3.0					100	
	10,000 to 19,999	within Income within Frequency	5.4	10.5	6.5	10.6	7.7	25.0					7.4	
	20,000 to 29,999	within Income within Frequency	58.0	19.8	13.6	4.9		1.2			1.2	1.2	100	
	30,000 to 39,999	within Income within Frequency	23.2	16.8	14.3	8.5		25.0			100	100	18.2	
	40,000 to 49,999	within Income within Frequency	60.0	15.0	15.0	5.0	5.0						100	
	50,000 to 59,999	within Income within Frequency	5.9	3.2	3.9	2.1	7.7							4.5
	60,000 to 69,999	within Income within Frequency	50.0			50.0								100
	70,000 or more euros	within Income within Frequency	0.5			2.1								0.4
			100										100	
				1.1									0.2	
Children in household	Yes	within Children within Frequency	51.0	20.3	14.7	8.4	2.8	0.7	0.7			0.7	0.7	100
		within Children within Frequency	36.0	30.5	27.3	25.5	30.8	33.3	33.3			100	100	32.1
	No	within Children within Frequency	42.4	22.2	18.5	11.8	3.0	0.7	0.7	0.7				100
		within Children within Frequency	62.1	69.5	71.4	74.5	69.2	66.7	66.7	100				66.7

Base: N=445(Internet users).

Pearson's Chi-Square (significant correlations): frequency by gender= 24.641(a), df= 12, **=significant at p<0.01.

Table A.6-5. Next...Please tell me if you ever do any of the following when you go online... (%)

			Online activities											Total	
			Email	Info	Game	Chat	Buy	Look for work	Public services	MUSIC sites	List en music	Ban king	Wo rk onli ne		Oth er
Total			61.7	88.8	20.2	20.6	13.7	11.2	19.4	2.1	0.2	0.2	1.6	2.7	
Gender	Male	within Gender	64.3	85.3**	22.6		15.4	9.8	19.9	3.0		0.4		1.9	100
		within Activities	62.2	57.3**	66.7	68.5	67.2	52.0	60.9	80.0		100		41.7	59.6
	Female	within Gender	58.1	93.9**	16.7	16.2	11.2	13.3	18.9	1.1	0.6			3.9	100
		within Activities	37.8	42.7**	33.3	31.5	32.8	48.0	39.1	20.0	100			58.3	40.4
Age	15-24	within Age Within Activities	49.6**	85.7	43.7**	39.5**	12.6	6.7	7.5*	4.2	0.8			2.5	100
			21.5**	25.8	57.8**	51.1**	24.6	16.3	10.3**	55.6	100			25.0	26.7
	25-39	within Age Within Activities	66.0**	91.5	14.0**	15.9**	14.9	14.0	22.4**	2.0		0.5		3.0	100
			48.0**	46.5	31.1*	34.8**	49.2	57.1	51.7**	44.4		100		50.0	44.9
	40-64	within Age Within Activities	65.0**	86.7	8.3*	10.8**	11.7	10.9	27.5**					2.5	100
			28.4**	26.3	11.1*	14.1**	23.0	26.5	37.9**					25.0	27.0
	65+	within Age Within Activities	100**	100			33.3								100
		2.2*	1.5			3.3								1.3	
Education	None, or grades 1-8	within education		33.3**	66.7**	33.3**									100
		Within Activities		0.3*	2.2*	1.1**									0.7
	High school incomplete	within education	43.6**	76.9**	62.5**	27.5**	5.1*	5.1*		2.5					100
		Within Activities	6.2*	7.6*	27.8**	12.2**	3.3*	4.0*		11.1					8.8
	High school graduate	within education	55.0**	89.0**	22.0**	26.3**	10.1**	3.0*	12.0*	2.0	1.0	1.0	1.0	7.0	100
Within		20.0**	22.5**	24.4**	28.9**	16.7**	6.0*	14.0**	22.2	100	100	14.3	58.3	22.5	

	Business or vocational school	59.3**	86.8**	17.0**	9.4*	3.8*	11.3	24.5**	3.8			1.9	100	
	Some college, no 4-year degree	11.6**	11.6**	10.0**	5.6*	3.3*	12.0*	15.1**	22.2			8.3	11.9	
	College graduate	69.4**	96.0**	16.3**	34.7**	18.4**	18.0*	20.0**		4.0	2.0	100		
	Postgraduate training	12.4**	12.2**	8.9*	18.9**	15.0**	18.0*	11.6**		28.6	8.3	11.2		
	Within Activities	64.9**	89.3**	12.6**	16.7**	15.3**	14.6*	22**	2.7	0.7	1.3	100		
	Within Activities	35.6**	33.9**	21.1**	27.8**	38.3**	44.0*	38.4**	44.4	14.3	16.7	33.7		
	Within Activities	80.9**	95.8**	10.4**	10.6**	29.2**	17.0*	36.2**		6.3	2.1	100		
	Within Activities	13.8**	11.6**	5.6*	5.6*	23.3**	16.0*	19.8**		42.9	8.3	10.8		
Income	Less than 10,000	57.6	96.9	15.6	24.2	15.2	12.1	12.1*	3.1			3.0	100	
	10,000 to 29,999	6.9	7.8	5.6	8.8	8.2	8	4.7*	10.0			8.3	7.2	
	30,000 to 49,999	67.9	91.3	14.8	11.1	18.5	8.6	29.6*		1.2		6.2	100	
	50,000 to 99,999	20	18.5	13.3	9.9	24.6	14	27.9*		100		41.7	18.2	
	100,000 or more	68.4	73.7		15.8	5.3	15.8	25.0*			5.3		100	
	Within Income	4.7	3.5		3.3	1.6	6.0	5.8*			14.3		4.3	
	Within Income	100	100	50.0	50.0			50.0*					100	
Within Income	1.1	0.8	1.1	1.1			1.2*					0.7		
Within Income		100		100			100*					100		

	eur os	me Withi n Activi ties		0.3		1.1			1.2*					0.2	
Child ren in house hold	Yes	Withi n Childr en Withi n Activi ties	65.0	88.1	9.8*	11.1*	11.2	9.7	25.7*			0.7	2.8	100	
		Withi n Activi ties	33.9	31.9	15.6**	17.4**	26.2	27.5	42.5*			14.3	33.3	32.1	
	No	Withi n Childr en Withi n Activi ties	60.6	89.2	25.3**	25.6**	15.2	12.4	16.8*	3.0*	0.3	0.3	2.0	2.7	100
		Withi n Activi ties	65.7	67.1	83.3**	82.6**	73.8	72.5	57.5*	9.0*	100	100	85.7	66.7	66.7

Base: N=445 (Internet users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): information online by gender= 7.885(b), df= 1; email by education= 21.591(a), df= 7; information online by education= 23.029(a), df= 7; play games by education= 58.252(a), df= 7; chat by education= 18.349(a), df= 7; buy products online by education= 19.854(a), df= 7; look for work by education= 14.447(a), df= 7; contact public administration by education= 24.843(a), df= 7; play games by children in household= 14.304(a), df= 2; chat by children in household= 13.730(a), df= 2; contact public administration by children in household= 6.073(a), df= 2; visit sites with music by children in household= 11.296(a), df= 2; email by age= 1, 3.251(a), df= 3; play games by age= 57.479(a), df= 3; chat by age= 37.186(a), df= 3; public administration by age= 18.448(a), df= 3; public administration by income= 14.009(a), df= 5;

Table A.6-6. I am going to read you some Internet terms you may or may not be familiar with. As I read each one, please tell me... (Mean)

(3 point scale from 1=Yes, have good idea what term means to 3=Never heard term)

	Virus	Cookies	Spyware	Adware	Phishing	Spam
Total	1.01	1.69	1.90	2.18	2.29	1.87
Gender						
Male	1.00	1.51**	1.70**	1.99**	2.14**	1.74*
Female	1.02	1.95**	2.21**	2.48**	2.51**	2.05*
Total	1.01	1.69**	1.90**	2.18**	2.29**	1.87*
Age						
15-24	1.02	1.78*	1.95**	2.24	2.35**	1.99**
25-39	1.00	1.59*	1.82**	2.15	2.30**	1.80**
40-64	1.01	1.75*	1.98**	2.14	2.21**	1.87**
65+	1.00	2.25*	2.25**	3.00	3.00**	1.62**
Total	1.01	1.69*	1.90**	2.18	2.29**	1.87**
Education level						
None, or grades 1-8	1.00**	1.50**	1.67**	2.33	1.50*	2.33**
High school incomplete	1.04**	2.26**	2.45**	2.58	2.66*	2.30**
High school graduate	1.02**	1.85**	2.04**	2.15	2.29*	1.90**
Business or vocational school	1.02**	1.61**	1.77**	2.07	2.38*	1.98**
Some college, no 4-year degree	1.00**	1.61**	1.77**	2.29	2.51*	1.78**
College graduate	1.00**	1.57**	1.88**	2.15	2.19*	1.81**
Postgraduate training	1.00**	1.48**	1.62**	2.09	2.00*	1.58**
Income						
Less than 10,000	1.00	1.65	1.73	2.00	1.94*	1.87
10,000 to under 29,999	1.02	1.55	1.80	2.11	2.18*	1.70
30,000 to under 49,999	1.00	1.54	1.96	2.25	1.99*	2.00
50,000 to under 99,999	1.00	1.50	2.00	2.00	1.50*	2.00
100,000 or more euros	1.00	1.00	1.00	1.00	1.00*	1.00
Children in household						
Yes	1.01**	1.73	1.94**	2.33**	2.33*	1.93
No	1.64**	1.68	1.88**	2.12**	2.28*	1.85

Base: N=445 (Internet users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): virus by education= 84.105(a), df= 21; virus by children in household= 36.921(a), df= 6; Internet cookies by gender= 23.839(a), df= 3; Internet cookies by age= 21.288(a), df= 9; Internet cookies by education= 48.683(a), df= 21; spyware by gender= 29.962(a), df= 3; spyware by age= 19.531(a), df= 9; spyware by education= 54.108(a), df= 21; spyware by children in household= 17.426(a), df= 6; adware by gender = 28.647(a), df= 3; adware by children in household= 18.879(a), df= 6; Internet phishing by gender= 20.034(a), df= 3; Internet phishing by age= 46.861(a), df= 9; Internet phishing by education= 36.178(a), df= 21; Internet phishing by income= 25.386(a), df= 15; Internet phishing by children in household= 16.120(a), df= 6; spam by gender= 10.276(a), df= 3; spam by age= 22.462(a), df= 9; spam by education= 42.776(a), df= 21;

Table A.6-7-A. Do you worry about any of the following when you use the Internet?

			Online risks							Total	
			Virus	Cookies	Spyware	Adware	Phishing	Spam	Other***		Don't worry about anything
(%) Total			80.0	11.5	12.4	5.9	5.7	11.5	1.3	12.8	141.1
Gender	Male	within Gender	76.6*	13.6	16.2**	7.1	7.5	12.1	1.6	13.9	100
		within Risks	57.0*	70.6	78.2**	70.4	76.9	62.7	100	64.9	59.6
	Female	within Gender	85.0*	8.3	6.7**	4.4	3.3	10.6	0.6	11.1	100
		within Risks	43.0*	29.4	21.8**	29.6	23.1	37.3	100	35.1	40.4
Age	15-24	within Age	77.3	10.9	7.5	1.7**		5.9	0.8	14.2	100
		within Risks	25.8	26.0	16.1	7.7**		13.7	100	29.8	26.8
	25-39	within Age	80.5	12.5	16.0	5.0**	9.0**	13.0	0.5	13.5	100
		within Risks	45.2	50.0	57.1	38.5**	72.0*	51.0	50.0	47.4	45.0
	40-64	within Age	83.2	10.1	12.5	11.7**	5.8**	15.0	0.8	10.8	100
		within Risks	27.8	24.0	26.8	53.8**	28.0*	35.3	50.0	22.8	26.8
	65+	within Age	66.7						33.3		100
		within Risks	1.1						100		1.4
Education	None, or grades 1-8	within Education	66.7			33.3					100
		within Risks	0.6			3.7					0.7
	High school incomplete	within Education	71.8	12.5	5.1			7.5		20.0	100
		within Risks	7.9	9.6	3.6			5.8		14.0	8.8
	High school graduate	within Education	80.0	13.0	8.0	5.0	5.0	9.0		17.2	100
		within Risks	22.5	25.0	14.3	18.5	19.2	17.3		29.8	22.5
	Business or vocational school	within Education	83.0	11.1	11.3	3.8		1.9	1.9	13.2	100
		within Risks	12.4	11.5	10.7	7.4		1.9	100	12.3	11.9
	Some college, no 4-year degree	within Education	91.8	14.0	14.0	10.0	8.0	22.0		6.0	100
		within Risks	12.7	13.5	12.5	18.5	15.4	21.2		5.3	11.0
College graduate	within Education	75.3	12.0	13.9	6.6	6.6	13.2	2.0	14	100	
	within Risks	31.8	34.6	37.5	37	38.5	38.5	100	36.8	33.8	
Postgraduate training	within Education	87.5	6.4	25.0	8.3	14.6	16.7	2.1	2.1	100	

g		Within Risks	11.8	5.8	21.4	14.8	26.9	15.4	50.0	1.8	10.8
Income		Within Income	75.0	9.4	15.6	9.1	12.5	9.1		9.4	100
	Less than 10,000	Within Risks	6.8	5.9	9.1	11.5	16.0	5.9		5.4	7.2
	10,000 to under 29,999	Within Income	85.0	12.5	13.6	7.5	10.0	12.3	1.3	11.1	100
		Within Risks	19.2	19.6	20.0	23.1	32.0	19.6	50.0	16.1	18
	30,000 to under 49,999	Within Income	78.9	5.3	26.3	5.3		15.8		5.3	100
		Within Risks	4.2	2.0	9.1	3.8		5.9		1.8	4.3
	50,000 to under 99,999	within Income	100	50.0							100
		within Risks	0.8	2.0							0.7
100,000 or more euros	Within Income	100								100	
	Within Risks	0.3								0.2	
Children in household	Yes	Within Children	86.1*	11.9	12.5	8.4	7.0	13.9	1.4	9.1	100
		Within Risks	34.8*	33.3	32.1	46.2	40.0	39.2	100	22.8	32.4
	No	Within Children	77.4*	11.4	12.8	4.7	5.1	10.1	1.0	14.1	100
		Within Risks	64.6*	66.7	67.9	53.8	60.0	58.8	100	73.7	66.7

Base: N=445 (Internet users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 *** Other = Internet diallers; Personal information violation; Mobile & credit card fraud
 Pearson's Chi-Square (significant correlations): virus by gender= 4.723(b), df= 1; spyware by gender= 8.926(b), df= 1; adware by age= 11.776(a), df= 3; Internet phishing by age= 11.765(a), df= 3; virus by children in household= 6.827(a), df= 2;

Table A.6-7-B Overall, how confident are you that you can keep things like computer viruses, Internet cookies, spyware, adware, Internet phishing and spam emails off your home computer when you want to? (Mean)

(scale 1-4: 'not confident at all' – 'very confident')

	Mean
Total	2.19
Gender	
Male	2.29**
Female	2.02**
Age	
15-24	2.22
25-39	2.23
40-64	2.10
65+	2.23
Education	
None, or grades 1-8	3.00**
High school incomplete	2.14**
High school graduate	2.00**
Business or vocational school	2.38**
Some college, no 4-year degree	2.25**
College graduate	2.18**
Postgraduate training	2.35**
Income	
Less than 10,000	2.42
10,000 to under 29,999	2.16
30,000 to under 49,999	2.44
50,000 to under 99,999	2.00
100,000 or more euros	3.00
Children in household	
Yes	2.07
No	2.25

Base: N=372 (Internet users who go online from home).

Pearson's Chi-Square (significant correlations): confidence by gender= 19.263(a), df= 4; confidence by education= 55.963(a), df= 28, **= significant at p<0.01.

Table A.6-8-A Which of the following tools or technologies for your protection on the Internet have you used at least once? (%)

			Online tools					Total	
			Anti-virus	Firewa ll	Spyware remover	Adware remover	Anti-phishing software		Spam killer
Total			90.0	34.9	19.8	17.4	10.6	14.7	187.4
Gender	Male	within Gender	90.2	40.0**	22.9	20.0	13.2	16.5	100.0
		within Tools	64.7	73.9**	74.6	73.2	79.4	72.3	64.5
	Female	within Gender	89.4	25.7**	14.2	13.3	6.2	11.5	100.0
		within Tools	35.3	26.1**	25.4	26.8	20.6	27.7	35.5
Age	15-24	within Age	89.5	32.2	20.7	16.1	7.0	14.0	
		within Tools	26.9	25.2	28.6	25.0	17.6	25.5	
	25-39	within Age	90.3	36.1	19.4	16.6	13.1	16.6	
		within Tools	45.5	46.8	44.4	42.9	55.9	51.1	
	40-64	within Age	90.1	38.3	21.0	22.2	11.1	13.6	
		within Tools	25.5	27.9	27.0	32.1	26.5	23.4	
	65+	within Age	100.0			50.0			
		within Tools	2.1			1.9			
Educa tion	None, or grades 1-8	within Education	100.0		14.3	9.5	4.8		100.0
		within Tools	0.7		4.8	3.7	3.0		0.6
	High school incomplete	within Education	90.5	33.3	14.9	11.9	7.6	19.0	100.0
		within Tools	6.6	6.3	16.1	14.8	15.2	8.7	6.6
	High school graduate	within Education	91.0	28.8	13.8	10.0	6.7	9.1	100.0
		within Tools	21.3	17.0	6.5	5.6	6.1	13.0	20.8
	Business or vocational school	within Education	89.7	36.7	25.0	20.0	14.6	6.7	100.0
		within Tools	9.1	9.8	16.1	14.8	18.2	4.3	9.5
	Some college, no 4-year degree	within Education	95.1	41.5	18.4	17.7	12.3	12.5	100.0
		within Tools	13.6	15.2	33.9	37.0	42.4	10.9	12.6
	College graduate	within Education	88.6	37.7	30.2	27.9	11.6	17.5	100.0
		within Tools	35.3	38.4	21.0	22.2	15.2	43.5	36.0
Postgraduate training	within Education	86.0	32.6	100.0			20.9	100.0	
	within Tools	12.9	12.5	1.6			19.6	13.6	
Incom e	Less than 10,000	within Income	88.0*	28.0	23.1	23.1	20.0	12.0	100.0
		within Tools	7.7**	6.4	9.4	10.7	15.2	6.5	7.9
	10,000 to under 29,999	within Income	88.1**	31.0	28.8	27.1	15.5	19.0	100.0
		within Tools	18.1**	16.5	26.6	28.6	27.3	23.9	18.3

	30,000 to under 49,999	Tools within Income	80.0*	21.4	13.3	28.6		21.4	100.0
		Tools within Income	4.2**	2.8	3.1	7.1		6.5	4.4
	50,000 to under 99,999	Tools within Income	50.0*	50.0					100.0
		Tools within Income	0.3**	0.9					0.9
	100,000 or more euros	Tools within Income		100.0					100.0
		Tools within Income		0.9					0.3
Children in household	Yes	within Children	93.1	31.7	15.0	14.0	9.0	7.9*	100.0
		within Tools	32.9	28.8	23.8	25.5	27.3	17.4*	31.8
	No	within Children	88.8	36.1	21.8	18.5	10.7	17.2*	100.0
		within Tools	66.8	70.3	74.6	72.7	69.7	80.4*	67.6

Base: N= 318 (users from home having used programmes for Internet security). *=significant at $p < 0.05$, **=significant at $p < 0.01$

Pearson's Chi-Square (significant correlations): firewall by gender= 6.589(b), df= 1; anti-virus by income= 16.523(a), df= 5; spam-killer by children in household= 6.846(a), df= 2;

Table A.6-8-B Why have you never used such tools or technologies?" (%)

			Reasons for not using tools/ technologies for Internet protection							Total
			I don't know what they are for	I don't know how to install them	I don't know how to use them	I am not concerned about security	I have neglected doing this	The y are too expensive	Oth er	
Total			29.7	40.2	31.1	15.1	3.9	5.4	8.0	133.4
Gender	Male	within Gender	33.3	38.9	26.3	16.7	5.6	5.6	11.1	100.0
		within Reason	42.9	36.8	33.3	42.9	50.0	50.0	50.0	38.3
	Female	within Gender	27.6	41.4	34.5	13.3	3.3	3.4	6.7	100.0
		within Reason	57.1	63.2	66.7	57.1	50.0	50.0	50.0	61.7
Age	15-24	within Age	40.0	40.0	20.0	13.3	6.7	6.7	13.3	100.0
		within Reason	42.9	31.6	21.4	28.6	50.0	33.3	50.0	31.3
	25-39	within Age	27.3	38.1	28.6	19.0	4.5	4.5	9.1	100.0
		within Reason	42.9	42.1	42.9	57.1	50.0	33.3	50.0	45.8
	40-64	within Age	18.2	45.5	45.5	9.1		9.1		100.0
		within Reason	14.3	26.3	35.7	14.3		33.3		22.9
Educa tion	High school incomplete	within Educat ion	50.0	38.5	25.0	7.7	8.3	8.3	8.3	100.0
		within Reason	42.9	25.0	20.0	12.5	50.0	50.0	25.0	25.5
	High school graduate	within Educat ion	18.2	63.6	54.5	9.1	9.1		9.1	100.0
		within Reason	14.3	35.0	40.0	12.5	50.0		25.0	23.4
	Busine ss or vocati onal school	within Educat ion	40.0	40.0	40.0	20.0				100.0
		within Reason	14.3	10.0	13.3	12.5				10.6
	Some college , no 4-year	within Educat ion	25.0	80.0	25.0				20.0	100.0
		within Reason	7.1	20.0	6.7				25.0	8.5
	Colleg e graduate	within Educat ion	14.3	14.3	21.4	35.7		7.7	7.1	100.0
		within Reason	14.3	10.0	20.0	62.5		50.0	25.0	29.8
Postgr aduate trainin g	within Educat ion	100							100.0	
	within Reason	7.1							2.1	
Incom e	Less than 10,000 10,000 to	within Incom e	33.3	33.3		33.3		33.3		100.0
		within Reason	7.1	5.3		14.3		50.0		6.3
		within Incom e	18.2	27.3	20.0	27.3	18.2		9.1	100.0

	under 29,999	e within Reason	14.3	15.8	13.3	42.9	100		25.0	22.9
	30,000 to 49,999	within Income within Reason			100					100.0
					6.7					2.1
Children in household	Yes	within Children	26.7	53.3	53.3	6.7				100.0
		within Reason	28.6	42.1	53.3	12.5				31.3
	No	within Children	31.3	32.3	21.9	21.9	6.3	9.4	12.5	100.0
		within Reason	71.4	52.6	46.7	87.5	100	100	100	66.7

Base: N= 48 (users from home who have not used programmes for Internet security).
 =non-significant at $p < 0.05$

Table A.6-9 What are the reasons you don't use the Internet or email?
(%)

			Reasons for not using the Internet							Total		
			I'm not interested	I don't need it	I don't have access	It's too difficult/frustrating	It's too expensive	I don't have the time	I don't know much		Other***	
Total			43.2	63.4	12.5	5.7	3.6	6.9	2.5	2.3	140.1	
Gender	Male	Within Gender	40.4	59.1	11.7	6.1	5.7*	7.8	3.0	3.1	100.	
		Reason within Gender	38.8	38.6	39.1	43.8	65*	47.4	50.0	100	41.4	
	Female	Within Gender	45.1	66.3	12.9	5.5	2.1*	6.1	2.1	1.9	100.	
		Reason within Gender	61.3	61.4	60.9	56.3	35*	52.6	50.0	100	58.6	
Age	15-24	Within Age	20.8*	45.3*	37.7**		13.2**	9.6		3.8*	100	
		Reason within Age	4.6**	6.8*	28.6**		36.8**	13.2		40.0*	9.5	
	25-39	Within Age	33.3**	64.8*	20.0*	2.9	3.8**	9.6	1	3.9*	100	
		Reason within Age	14.6**	19.3*	30.0*	9.4	21.1**	26.3	7.1	100*	18.9	
	40-64	Within Age	49.2*	63.2*	9.5**	7.4	2.9**	7.0	2.9	2.0*	100	
		Reason within Age	49.6*	43.3*	32.9**	56.3	36.8**	44.7	50.0	100*	43.6	
	65+	Within Age	48.1**	69.2*	3.8**	7.1	0.6**	3.8	3.8	0.6*	100	
		Reason within Age	31.3**	30.6*		34.4	5.3**	15.8	42.9	20*	28.0	
	Educational	None, or grades 1-8	Within Education	62.3**	77*	8.2	6.6	1.6	1.7	1.7		100
			Reason within Education	15.8**	13.3*	7.2	12.9	5.3	2.7	7.7		11
High school incomplete		Within Education	52.6**	58.2*	9.6	8.1	3.7	7.4	1.5	1.5	100	
		Reason within Education	29.5**	22.1*	18.8	35.5	26.3	27	15.4	33.3	24.3	
High school graduate		Within Education	39.6**	65.5*	14.3	4.1	2.6	6.1	3.1	3.0	100	
		Reason within Education	32.4**	36.5*	40.6	25.8	26.3	32.4	46.2	100	35.3	
Business or vocational school		Within Education	32.4**	66.2*	19.2	4.1	8.2	9.6	1.4	1.4	100	
		Reason within Education	10.0*	13.9*	20.3	9.7	31.6	18.9	7.7	50	13.1	
Some college, no 4-year		Within Education	35.7**	50*	14.3			21.4	7.1	14.2	100	
		Reason within Education	2.1**	2*	2.9			8.1	7.7	36.7	2.5	
College graduate	Within Education	36.2**	56.9*	10.3	5.3	3.5	5.2	1.8	3.4	100		
	Reason within Education	8.7**	9.3*	8.7	9.7	10.5	8.1	7.7	36.7	10.4		
Postgraduate training	Within Education		16.7*	16.7	33.3		16.7	16.7		100		
	Reason within Education		0.3*	1.4	6.5		2.7	7.7		1.1		
Income	Less than	Within Income	56.9	64.6*	13.8	7.7	7.8	1.6	1.6	1.5	100	

	10,000	within Reason	15.4	11.9*	12.9	15.6	25.0	2.6	7.7	16.7	11.7
	10,000 to under 29,999	Within Income within Reason	43.9	61*	11.4	7.4	3.3	6.5	3.3	4.1	100
	30,000 to under 49,999	Within Income within Reason	22.5	21.2*	20.0	28.1	20.0	21.1	30.8	83.4	22.1
	50,000 to under 99,999	Within Income within Reason	30.8	100*	15.4				7.7		100
			1.7	3.7*	2.9				7.7		2.3
			100								100
			0.4								0.2
Children in household	Yes	Within Children	46.7*	65.9	8.2**	6.6	1.8**	7.4	3.1	1.8	100
		within Reason	75.5*	73.0	46.4*	81.3	35.0**	76.3	85.7	100	70.3
	No	Within Children	35.9*	56.6	24.3**	3.9	8.5**	5.9	1.3	3.9	100
		within Reason	22.8*	24.4	53.6**	18.8	65**	23.7	14.3	100	27.4

Base: N= 556 (non-users). *=significant at $p < 0.05$, **=significant at $p < 0.01$

***Other: 'other', 'I am worried about the impact on everyday life/work/human relationships' & 'I am worried about my security on the Internet'

Pearson's Chi-Square (significant correlations): too expensive by gender= 4.777(b), df= 1; not interested by age= 20.082(a), df= 3; no need by age= 9.878(a), df= 3; no access by age= 48.760(a), df= 3; too expensive by age= 19.261(a), df= 3; other by age= 8.621(a), df= 3; not interested by education= 24.963(a), df= 7; no need by education= 15.048(a), df= 7; no need by income= 9.639(a), df= 4; not interested by children in household= 5.999(a), df= 2; not access by children in household= 28.051(a), df= 2; too expensive by children in household= 14.730(a), df= 2.

Table A.6-10. Did you ever at some point use the Internet or email, but have since stopped for some reason? (%)

			Usage of the Internet in the past			Total
			Yes	No	DK/Ref used	
Total			9.2	89.6	1.2	100
Gender	Male	Within Gender	14**	84.3**	1.7**	100**
		Usage in the past	62.7**	38.8**	57.1**	41.3**
	Female	Within Gender	5.8**	93.3**	0.9**	100**
		Usage in the past	37.3**	61.2**	42.9**	58.7**
Age	15-24	within Age	30.8**	69.2**		100**
		Usage in the past	32**	7.2**		9.4**
	25-39	within Age	17.1**	82.9**		100**
		Usage in the past	36.0**	17.5**		18.9**
	40-64	within Age	6.2**	93.4**	0.4**	100**
		Usage in the past	30**	45.4**	14.3**	43.6**
	65+	within Age	0.6**	95.5**	3.8**	100**
		Usage in the past	2.0**	29.9**	85.7**	28.1**
Education	None, or grades 1-8	within Education	1.6**	96.7**	1.6**	100**
		Usage in the past	1.9**	11.8**	14.3**	11**
	High school incomplete	within Education	6.7**	93.3**		100**
		Usage in the past	17.3**	25.3**		24.2**
	High school graduate	within Education	12.2**	86.3**	1.5**	100**
		Usage in the past	46.2**	34.1**	42.9**	35.4**
	Business or vocational school	within Education	10.8**	89.2**		100**
		Usage in the past	15.4**	13.3**		13.3**
	Some college, no 4-year degree	within Education	14.3**	85.7**		100**
		Usage in the past	3.8**	2.4**		2.5**
	College graduate	within Education	13.8**	84.5**	1.7**	100**
		Usage in the past	15.4**	9.8**	14.3**	10.4**
Postgraduate training	within Education		100**		100**	
	Usage in the past		1.2**		1.1**	
Income	Less than 10,000	within Income	6.3	92.2	1.6	100
		Usage in the past	7.8	11.9	14.3	11.5
	10,000 to under 29,999	within Income	10.6	88.6	0.8	100
		Usage in the past	25.5	21.9	14.3	22.2
	30,000 to under 49,999	within Income	7.7	92.3		100
		Usage in the past	2	2.4		2.3
	50,000 to under 99,999	within Income	100			100
		Usage in the past	2			0.2
Children in household	Yes	within Children in household	5.1**	93.6**	1.3**	100**
		Usage in the past	39.2**	73.3**	71.4**	70.1**
	No	within Children in household	20.3**	79.7**		100**
		Usage in the past	60.8**	24.5**		27.5**

Base: N= 556 (non-users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): usage in the past by gender= 11.650(a), df= 2; usage in the past by age= 64.844(a), df= 6; usage in the past by education= 37.016(a), df= 14; usage in the past by children in household= 53.579(a), df= 4.

Table A.6-11-A Would you like to start using the Internet and email, or isn't that something you're interested in?

(2 point scale from 1='yes, interested to 2='no, not interested')

	Mean
Total	1.83
Gender	
Male	1.80
Female	1.85
Age	
15-24	1.43*
25-39	1.75*
40-64	1.87*
65+	1.95*
Education level	
None, or grades 1-8	1.94**
High school incomplete (grades 9-11)	1.89**
High school graduate	1.79**
Business, Technical, or vocational school	1.76**
Some college, no 4-year degree	1.65**
College graduate	1.78**
Postgraduate training	1.73**
Income	
Less than 10,000	1.84
10,000 to under 29,999	1.76
30,000 to under 49,999	1.83
50,000 to under 99,999	2.00
Children in the household	
Yes	1.88**
No	1.67**

Base: N= 556 (non-users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): interest in future use by age= 87.376(a), df= 6; interest in future use by education= 29.733(a), df= 14; interest in future use by children in household= 36.887(a), df= 4;

Table A.6-II-B How likely do you think it is, if at all, that you will start using the Internet or email someday?

(4 point scale from 1='definitely not' to 4='definitely')

	Mean
Total	1.71
Gender	
Male	1.84*
Female	1.62*
Age	
15-24	2.64**
25-39	2.23**
40-64	1.60**
65+	1.22**
Education	
None, or grades 1-8	1.13**
High school incomplete	1.45**
High school graduate	1.84**
Business, Technical, or vocational school	2.20**
Some college, no 4-year degree	2.09**
College graduate	1.90**
Postgraduate training	1.94**
Income	
Less than 10,000	1.69
10,000 to under 29,999	1.75
30,000 to under 49,999	1.93
50,000 to under 99,999	1.00
Children in household	
Yes	1.53**
No	2.19**

Base: N: non-users (556). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): likelihood by gender= 9.342(a), df= 3; likelihood by age= 147.649(a), df= 9; likelihood by education= 90.610(a), df= 21; likelihood by children in household= 65.205(a), df= 6;

Table A.6-12 What do you think about the statement... ?

Demographics	Internet use	Mean (Q.21)	Mean (Q.22)	Mean (Q.26)	Mean (Q.27)	Mean (Q.28)	Mean (Q.29)
Gender							
Male	Yes	4.06	3.77	3.63	2.96	2.9	2.93
	No	3.51	3.06	3.97	3.57	3.0*	3.50**
Female	Yes	4.09	3.57	3.75	3.12	2.79	3.0
	No	3.35	3.08	4.16	3.75	3.21*	3.84**
Age							
15-24	Yes	4.05*	3.81**	3.57	2.86	3.06*	2.86
	No	3.7**	3.03**	3.81**	3.1**	3.02**	3.04**
25-39	Yes	4.11*	3.54**	3.63	3.08	2.75*	2.95
	No	3.50**	2.92**	3.92**	3.4**	3.12**	3.48**
40-64	Yes	4.06*	3.85**	3.88	3.15	2.87*	3.04
	No	3.37**	3.1**	4.12**	3.75**	3.01**	3.86**
65+	Yes	3.46*	2.77**	3.23	2.15	2.38*	3.54
	No	3.32**	3.16**	4.27**	4.02**	3.37**	3.84**
Education							
None, or grades 1-8	Yes	3.33**	4.0**	4.33**	3.33**	2.0**	2.67**
	No	2.83**	2.9**	4.41**	4.21**	3.2**	3.88**
High school incomplete	Yes	3.83**	3.59**	3.86**	3.1**	3.15**	3.19**
	No	3.31**	3.06**	4.16**	3.95**	3.19**	3.79**
High school graduate	Yes	4.11**	3.72**	3.79**	3.21**	2.98**	3.04**
	No	3.57**	3.13**	4.06**	3.54**	3.22**	3.59**
Business or vocational school	Yes	3.91**	3.74**	3.55**	3.08**	2.95**	3.16**
	No	3.47**	2.98**	3.85**	3.47**	2.89**	3.58**
Some college, no 4-year degree	Yes	4.01**	3.58**	3.66**	2.82**	2.71**	2.86**
	No	3.61**	3.18**	4.49**	3.98**	3.46**	4.21**
College graduate	Yes	4.15**	3.64**	3.62**	3.07**	2.77**	2.93**
	No	3.62**	3.16**	3.92**	3.39**	2.89**	3.7**
Postgraduate training	Yes	4.24**	3.93**	3.55**	2.64**	2.73**	2.6**
	No	3.61**	3.24**	3.42**	2.79**	2.73**	3.72**
Income							
Less than 10,000	Yes	4.01	3.65	3.56	2.87	2.65*	2.83
	No	3.39	2.97	4.08	3.68**	3.23*	3.89
10,000 to under 29,999	Yes	4.16	3.58	3.76	3.06	2.62*	2.80
	No	3.53	3.19	3.95	3.57**	3.2*	3.63
30,000 to under 49,999	Yes	4.1	4.04	3.51	3.26	3.05*	3.28
	No	3.66	3.16	4.0	4.0**	3.55*	3.28
50,000 to under 99,999	Yes	4.0	3.0	4.5	2.5	1.5*	1.50
	No	3.0	1.0	5.0	5.0**	3.0*	4.00
100,000 or more	Yes	5.0	4.0	1.0	3.0	1.0*	1.0
Children in household							
Yes	Yes	3.99**	3.68**	3.79**	3.19**	2.80	3.05**
No	No	3.41**	3.12**	4.14**	3.78**	3.19**	3.75**
	Yes	4.12**	3.7**	3.61**	2.94**	2.89	2.92**
	No	3.48**	2.98**	3.93**	3.4**	2.97**	3.55**

Base: N=556 (for non-users) or N=445 (for users) - filter: Internet use. * = significant at p<0.05, ** = significant at p<0.01

Pearson's Chi-Square (significant correlations):

Internet users: Q.21 by age= 25.352(a), df= 15; Q.21 by education= 162.352(a), df= 35; Q.21 by children in household= 53.595(a), df= 10; Q.22 by age= 37.306(a), df= 15; Q.22 by education= 147.779(a), df= 35; Q.22 by children in household= 46.978(a), df= 10; Q.26 by education= 81.645(a), df= 35; Q.26 by children in household= 31.337(a), df= 10; Q.27 by education= 78.314(a), df= 35; Q.27 by children in household= 30.917(a), df= 10; Q.28 by age= 27.006(a), df= 15; Q.28 by education= 65.049(a), df= 35; Q.28 by income= 38.844(a), df= 25; Q.29 by education= 81.104(a), df= 35; Q.29 by children in household= 29.141(a), df= 10

Internet non-users: Q.21 by age= 47.097(a), df= 15; Q.21 by education= 109.832(a), df= 35; Q.21 by children in household= 89.383(a), df= 10; Q.22 by age= 46.451(a), df= 15; Q.22 by education= 103.149(a), df= 35; Q.22 by children in household= 65.785(a), df= 10; Q.26 by age= 51.378(a), df= 15; Q.26 by education= 114.882(a), df= 35; Q.26 by children in household= 70.410(a), df= 10; Q.27 by age= 101.945(a), df= 15; Q.27 by education= 143.268(a), df= 35; Q.27 by income= 39.822(a), df= 20; Q.27 by children in household= 76.050(a), df= 10; Q.28 by gender= 11.420(a), df= 5; Q.28 by age= 68.933(a), df= 15; Q.28 by education= 125.405(a), df= 35; Q.28 by income= 33.097(a), df= 20; Q.28 by children in household= 39.767(a), df= 10; Q.29 by gender= 16.776(a), df= 5; Q.29 by age= 86.763(a), df= 15; Q.29 by education= 93.973(a), df= 35; Q.28 by children in household= 69.541(a), df= 10.

Table A.6-13: Q.23-25

Demographics	Internet use	Mean (Q.23)	Mean (Q.24)	Mean (Q.25***)
Gender				
Male	Yes	3.11	3.28	2.71
	No	2.75**	3.02*	
Female	Yes	3.05	3.23	2.53
	No	2.44**	2.79*	
Age				
15-24	Yes	3.14	3.19	2.64
	No	3.1**	3.08**	
25-39	Yes	3.07	3.29	2.65
	No	2.62**	2.84**	
40-64	Yes	3.04	3.26	2.63
	No	2.48**	2.9**	
65+	Yes	4.0	3.62	2.15
	No	2.47**	2.81**	
Education				
None, or grades 1-8	Yes	3.33**	4.0**	1.67**
	No	2.37**	2.63**	
High school incomplete	Yes	3.06**	3.17**	2.48**
	No	2.48**	2.8**	
High school graduate	Yes	3.06**	3.17**	2.4**
	No	2.62**	3.01**	
Business or vocational school	Yes	2.99**	3.17**	2.42**
	No	2.62**	2.86**	
Some college, no 4-year degree	Yes	2.84**	3.35**	2.71**
	No	2.57**	3.11**	
College graduate	Yes	3.16**	3.29**	2.7**
	No	2.59**	2.96**	
Postgraduate training	Yes	3.27**	3.37**	3.27**
	No	4.03**	3.0**	
Income				
Less than 10,000	Yes	3.07	3.34	2.65*
	No	2.6	2.96*	
10,000 to under 29,999	Yes	2.94	3.23	2.61*
	No	2.69	3.09*	
30,000 to under 49,999	Yes	3.02	3.31	3.13*
	No	2.45	3.11*	
50,000 to under 99,999	Yes	3.5	3.0	3.5*
	No	1.0	4.0*	
100,000 or more	Yes	3.0	3.0	4.0*
Children in household				
Yes	Yes	3.03*	3.23**	2.57**
	No	2.52**	2.89**	
No	Yes	3.12*	3.27**	2.68**
	No	2.69**	2.92**	

Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use. *=significant at p<0.05, **=significant at p<0.01. ***Only Internet users

Pearson's Chi-Square (significant correlations):

Internet users: Q.23 by education= 64.320(a), df= 35; Q.23 by children in household= 20.862(a), df= 10; Q.24 by education= 102.508(a), df= 28; Q.24 by children in household= 24.722(a), df= 8; Q.25 by education= 91.145(a), df= 28; Q.25 by income= 35.811(a), df= 20; Q.25 by children in household= 33.923, df= 8;
Internet non-users: Q.23 by gender= 20.791(a), df= 5; Q.23 by age= 71.905(a), df= 15; Q.23 by education= 122.918(a), df= 35; Q.23 by children in household= 53.201(a), df= 10; Q.24 by gender= 10.767(a), df= 4; Q.24 by age= 36.897(a), df= 12; Q.24 by education= 103.070(a), df= 28; Q.24 by income= 31.325(a), df= 16; Q.24 by children in household= 62.606(a), df= 8.

Table A.6-14 Level of agreement with the statement: 'I 'm missing out on things because I am not using the Internet and email'

(scale 1-5: 1='strongly disagree', 2='disagree', 3=neither agree nor disagree', 4='agree', 5='strongly agree')

Mean (Total)	2.33
Gender	
Male	2.56**
Female	2.17**
Age	
15-24	2.73**
25-39	2.48**
40-64	2.38**
65+	1.97**
Education	
None, or grades 1-8	1.55**
High school incomplete	2.07**
High school graduate	2.57**
Business or vocational school	2.34**
Some college, no 4-year degree	2.71**
College graduate	2.85**
Postgraduate training	3.03**
Income	
Less than 10,000	1.95**
10,000 to under 29,999	2.64**
30,000 to under 49,999	3.31**
50,000 to under 99,999	3.00**
Children in household	
Yes	2.28**
No	2.51**

Base: N=556 (non-users). *=significant at $p < 0.05$, **=significant at $p < 0.01$

Pearson's Chi-Square (significant correlations): missing out by gender= 23.414(a), df= 5; missing out by age= 65.454(a), df= 15; missing out by education= 113.030(a), df= 35; missing out by income= 42.548(a), df= 20; missing out by children in household= 58.630(a), df= 10.

Table A.6-15. What do you think about the statement...? (Mean)

Demographics	Internet use	Mean (Q.35)	Mean (Q.36)	Mean (Q.37)	Mean (Q.38)
Gender					
Male	Yes	2.57	2.72	3.19	3.17
	No	2.76*	2.89	2.98	2.97**
Female	Yes	2.55	2.76	3.05	3.26
	No	2.74*	2.81	3.07	3.16**
Age					
15-24	Yes	2.72	2.82*	3.29*	3.32
	No	2.93**	2.6**	2.73**	3.02**
25-39	Yes	2.49	2.63*	3.12*	3.13
	No	2.71**	2.8**	3.24**	3.16**
40-64	Yes	2.57	2.85*	3.02*	3.17
	No	2.59**	2.81**	2.91**	2.96**
65+	Yes	1.5	2.0*	2.5*	3.5
	No	3.12**	3.11**	3.26**	3.26**
Education					
None, or grades 1-8	Yes	2.0	2.0	3.0	4.0
	No	2.91**	3.05**	3.25**	3.03**
High school incomplete	Yes	2.96	3.03	3.21	3.35
	No	2.83**	3.06**	2.9**	3.25**
High school graduate	Yes	2.69	2.79	3.07	3.35
	No	2.9**	2.98**	3.11**	3.11**
Business or vocational school	Yes	2.5	2.78	3.31	3.18
	No	2.23**	2.47**	2.91**	2.88**
Some college, no 4-year degree	Yes	2.48	2.64	2.93	2.88
	No	2.39**	2.46**	3.00**	2.26**
College graduate	Yes	2.44	2.63	3.17	3.18
	No	2.71**	2.38**	2.93**	3.06**
Postgraduate training	Yes	2.53	2.7	3.12	3.13
	No	4.21**	4.21**	4.42**	4.21**
Income					
Less than 10,000	Yes	2.44	2.39	3.2*	2.84*
	No	2.85**	2.96**	3.01**	3.25**
10,000 to under 29,999	Yes	2.15	2.58	3.03*	3.15*
	No	2.7**	2.91**	2.91**	2.92**
30,000 to under 49,999	Yes	3.12	2.72	3.09*	3.47*
	No	2.7**	2.51**	2.75**	2.62**
50,000 to under 99,999	Yes	2.5	2.0	5.0*	2.0*
	No	1.0**	1.0**	3.0**	1.0**
100,000 or more	Yes	3.0	1.0	1.0*	5.0*
Children in household					
Yes	Yes	2.43	2.64	2.78**	3.1
	No	2.74*	2.89*	3.05	3.07
No	Yes	2.61	2.77	3.27**	3.25
	No	2.78*	2.73*	2.98	3.09

Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use. *=significant at p<0.05, **=significant at p<0.01

Pearson's Chi-Square (significant correlations):

Internet users: Q.36 by age= 26.409(a), df= 15; Q.37 by age= 26.960(a), df= 15; Q.37 by income= 40.015(a), df= 25; Q.37 by children in household= 31.138(a), df= 10; Q.38 by income= 42.293(a), df= 25;
Internet non-users: Q.35 by gender= 14.122(a), df= 5; Q.35 by age= 58.803(a), df= 15; Q.35 by education= 135.962(a), df= 35; Q.35 by income= 83.798(a), df= 20; Q.35 by children in household= 19.687(a), df= 10; Q.36 by age= 41.887(a), df= 15; Q.36 by education= 110.282(a), df= 35; Q.36 by income= 54.946(a), df= 20; Q.36 by children in household= 19.164(a), df= 10; Q.37 by age= 51.965(a), df= 15; Q.37 by education= 100.482(a), df= 35; Q.37 by income= 78.047(a), df= 20; Q.38 by gender= 16.277(a), df= 5; Q.38 by age= 42.609(a), df= 15; Q.38 by education= 106.202(a), df= 35; Q.38 by income= 88.047(a), df= 20;

Table A.6-16. How do you feel about the way in which the law in the country protects... (Mean)

(scale 1-5: 'very dissatisfied' – 'very satisfied')

	Users' security on the Internet? Are you...? (Q.30)	users' privacy on the Internet? Are you... (Q.31)
Total	2.67	2.61
Gender		
Male	2.60	2.58
Female	2.78	2.66
Age		
15-24	2.96**	2.89
25-39	2.67**	2.55
40-64	2.47**	2.47
65+	1.50**	2.0
Education		
None, or grades 1-8	3.0	3.0
High school incomplete	3.01	3.09
High school graduate	2.66	2.58
Business or vocational school	2.67	2.55
Some college, no 4-year degree	2.75	2.69
College graduate	2.66	2.52
Postgraduate training	2.45	2.52
Income		
Less than 10,000	2.56	2.73
10,000 to under 29,999	2.43	2.35
30,000 to under 49,999	2.78	2.73
50,000 to under 99,999	1.50	2.0
100,000 or more	1.0	1.0
Children in household		
Yes	2.40*	2.48**
No	2.82*	2.70**

Base: N=445 (for users). *=significant at $p < 0.05$, **=significant at $p < 0.01$
 Pearson's Chi-Square (significant correlations): Q.30 by age= 32.279(a), df= 15; Q.30 by children in household= 19.474(a), df= 10; Q.31 by children in household= 25.824(a), df= 10;

Table A.6-17. Awareness of authorities: “Do you know where, which authority, to address yourself if you face...” (%)

	...some problem in using the Internet, such as a difficulty in use? (Q.32)			...some security risk on the Internet? (Q.33)			...some privacy risk on the Internet? (Q.34)		
	Yes	No	Not sure	Yes	No	Not sure	Yes	No	Not sure
Total	24.4	64.8	4.2	17.9	73.6	2.9	17.5	71.5	5.8
Gender***									
Male	26.7	62.4	3.4	22.2*	68.8*	3.4*	20.7	67.7	6.4
Female	21.1	68.3	5.6	11.7*	80.6*	2.2*	12.8	77.2	5.0
Age***									
15-24	21.7	65.8	3.3	8.3	80.0	3.3	10.9	78.2	4.2
25-39	26.9	63.2	5.5	20.5	71	3.5	18.9	69.2	7.5
40-64	21.0	68.1	3.4	21.7	72.5	1.7	20.2	69.7	5.0
65+	66.7	33.3		33.3	66.7		33.3	66.7	
Education***									
None, or grades 1-8		33.3*	33.3**		66.7**			66.7	
High school incomplete	27.5*	55.0**	2.5**	5.1**	79.5**		10.0	72.5	5.0
High school graduate	18.0**	76.0**	5.0**	13.0*	83.0**	3.0**	16.0	77.0	4.0
Business or vocational school	29.6**	57.4*	3.7**	21.2*	71.2**	1.9**	17.3	73.1	5.8
Some college, no 4-year degree	12.0**	66.0**	10.0**	18.4*	67.3**	8.2**	16.3	71.4	8.2
College graduate	30.0**	60.0**	3.3**	19.3*	70.7**	3.3**	17.4	69.1	7.4
Postgraduate training	27.1*	70.8**	2.1**	29.2**	70.8**		29.2	68.8	2.1
Income***									
Less than 10,000	43.8*	46.9*	9.4*	27.3	60.6	6.1	24.2**	60.6**	12.1*
10,000 to under 29,999	32.1*	58.0*	2.5*	28.4	65.4	2.5	25.9*	65.4**	4.9*
30,000 to under 49,999	40.0*	60.0*		25.0	75.0		35**	60.0**	5.0**
50,000 to under 99,999	50.0*	50.0*		50.0	50.0			50.0**	50.0**
100,000 or more	100*				100				100*
Children in household***									
Yes	25.9	62.9	4.9	23.6	70.1	2.8	21.0	65.7	9.1
No	23.9	65.3	4.0	15.5	75.1	3.0	16.1	74.2	4.4

Base: N=445 (for Internet users). *=significant at $p < 0.05$, **=significant at $p < 0.01$. *** Row %
 Pearson's Chi-Square (significant correlations): Q.32 by education= 47.379(a), df= 21; Q.32 by income= 27.257(a), df= 15; Q.33 by gender= 9.132a, df= 3; Q.33 by education= 45.880, df= 21; Q.34 by income= 41.496(a), df= 15;

Table A.6-18. What do you think about the statement...? (Demographics)

Demographics	Internet use (I)	Mean (Q.39)	Mean (Q.40)
Male	Yes	3.31	2.97
	No	3.14	3.42*
Female	Yes	3.15	3.01
	No	3.12	3.0*
Age			
15-24	Yes	2.92*	2.8**
	No	3.13**	2.82**
25-39	Yes	3.4*	3.07**
	No	3.2**	3.15**
40-64	Yes	3.33*	3.14**
	No	3.1**	3.29**
65+	Yes	4.00*	2.0**
	No	3.1**	3.2**
None, or grades 1-8	Yes	2.0	2.0
	No	3.27**	3.31**
High school incomplete	Yes	2.97	3.01
	No	2.98**	3.39**
High school graduate	Yes	3.29	2.96
	No	3.26**	3.09**
Business or vocational school	Yes	3.28	3.01
	No	3.14**	3.12**
Some college, no 4-year degree	Yes	3.14	3.09
	No	2.98**	3.16**
College graduate	Yes	3.35	3.06
	No	2.82**	3.18**
Postgraduate training	Yes	3.23	2.69
	No	3.45**	4.0**
Income			
Less than 10,000	Yes	3.35**	2.92
	No	2.86**	2.84**
10,000 to under 29,999	Yes	3.08**	2.83
	No	3.15**	3.32**
30,000 to under 49,999	Yes	3.21**	3.28
	No	2.97**	2.94**
50,000 to under 99,999	Yes	5.0**	4.0
	No	3.0**	5.0**
100,000 or more	Yes	1.0**	3.0
Children in household			
Yes	Yes	3.39	3.03
	No	3.08*	3.21
No	Yes	3.19	2.97
	No	3.25*	3.13

(I) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use. *=significant at p<0.05, **=significant at p<0.01

Pearson's Chi-Square (significant correlations):

Internet users: Q.39 by age= 32.681, df= 15; Q.39 by income= 52.415, df= 25; Q.40 by age= 36.933, df= 15.

Internet non-users: Q.39 by age= 50.762, df= 15; Q.39 by education= 78.848, df= 35; Q.39 by income= 81.848, df= 20; Q.39 by children in household= 20.611, df= 10; Q.40 by gender= 14.645, df= 5; Q.40 by age= 52.554, df= 15; Q.40 by education= 78.919, df= 35; Q.40 by income= 91.236 df= 20.

Table A.6-19. What do you think about the statement: “people’s awareness of laws and policies on the Internet is low”? Do you...

(5 point scale from 1=‘strongly disagree’ to 5=‘strongly agree’)

Demographics	TOTAL: 3.08	
	Internet use (I)	Mean
	Yes	No
	Yes	2.98
	No	3.19
Gender		
Male	Yes	2.97
	No	3.42
Female	Yes	3.01
	No	3.0
Age		
15-24	Yes	2.8**
	No	2.82**
25-39	Yes	3.07**
	No	3.15**
40-64	Yes	3.14**
	No	3.29**
65+	Yes	2.0**
	No	3.2**
Education		
None, or grades 1-8	Yes	2.0
	No	3.31
High school incomplete	Yes	3.01
	No	3.39
High school graduate	Yes	2.96
	No	3.09
Business or vocational school	Yes	3.01
	No	3.12
Some college, no 4-year degree	Yes	3.09
	No	3.16
College graduate	Yes	3.06
	No	3.18
Postgraduate training	Yes	2.69
	No	4.0
Income		
Less than 10,000	Yes	2.92
	No	2.84
10,000 to under 29,999	Yes	2.83
	No	3.32
30,000 to under 49,999	Yes	3.28
	No	2.94
50,000 to under 99,999	Yes	4.0
	No	5.0
100,000 or more	Yes	3.0
Children in household		
Yes	Yes	3.03
	No	3.21
No	Yes	2.97
	No	3.13

(i) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use. **=significant at p<0.01

Pearson’s Chi-Square (significant correlations):

Internet users: Q.41 by age= 36.933(a), df= 15;

Internet non-users: Q.41 by age= 52.554(b), df= 15;

Table A.6-20. However, before today have you heard or not about Greek authorities monitoring the application of laws and policies on the protection of users on the Internet?

Demographics	TOTAL: YES	
	23.6	
	Internet use (I)	%
	Yes	31.8**
	No	17.1**
Gender		
Male	Yes	38.0**
	No	18.3
Female	Yes	22.8**
	No	16.3
Age		
15-24	Yes	27.5
	No	18.9**
25-39	Yes	32.8
	No	17.1**
40-64	Yes	32.5
	No	19**
65+	Yes	66.7
	No	13.4**
Education		
None, or grades 1-8	Yes	33.3**
	No	8.3**
High school incomplete	Yes	15.4**
	No	12.7**
High school graduate	Yes	24.2**
	No	17.9**
Business or vocational school	Yes	25.9**
	No	12.3**
Some college, no 4-year degree	Yes	30.6**
	No	28.6**
College graduate	Yes	38.0**
	No	39.7**
Postgraduate training	Yes	47.9**
	No	16.7**
Income		
Less than 10.000	Yes	31.3
	No	26.2**
10.000 to under 29.999	Yes	34.6
	No	20.3**
30,000 to under 49.999	Yes	42.1
	No	**
50.000 to under 99.999	Yes	50.0
	No	100**
100.000 or more	Yes	100
Children in household		
Yes	Yes	30.8
	No	17.2*
No	Yes	32.3
	No	18.3*

(I) Base: N=556 (for non-users) or N=445 (for users) – filter: Internet use. *=significant at $p < 0.05$, **=significant at $p < 0.01$

Pearson's Chi-Square (significant correlations):

Internet users: Q.42 by gender= 11.451(a), df= 2; Q.42 by education= 56.648(a), df= 14;

Internet non-users: Q.42 by age= 21.797(b), df= 6; Q.42 by education= 76.360(b), df= 14; Q.42 by income= 26.889(b), df= 8; Q.42 by children in household= 12.118(b), df= 4;

Appendix 8

Table A.8-1 Media use: Internet user perspective

		Users				
		Theme	Media use			
		Questions	Which media	How often	Purposes of use	Attitudes
1st group	Stefanos	Telephone, TV, Computer & Internet	Everyday	Mostly for work and then for relaxation	Important for work	
	Myriam	Telephone, TV, Magazines, Radio, Computer, Internet & MP3	Everyday	Mostly for studies and then for communication & relaxation	Important for work/studies	
	Apostolos	Newspapers, TV, Radio, Computer & Internet	Everyday	Internet & computer for work. Other media for relaxation & information	Important for work, information & relaxation	
	Agapi	Newspapers, Magazines, TV, Telephone, Computer & Internet	Everyday	Internet & computer for communication. Other media for other purposes	Important for work, information & relaxation	
	Ioanna	Telephone, TV, Radio, Newspapers, Computer & Internet	Everyday	Internet & computer for communication. Other media for other purposes	Important for communication, relaxation and information	
	Petros					
2nd group	Antonios	TV, Radio, Mobile, Computer, Internet, MP3, I-Pod, Camera, Camcorder	Everyday	Entertainment, communication, information	Computer/Internet more important than mass media due to convergence	
	Eirini	Radio, TV, Mobile, Newspaper, Computer, Internet		Entertainment, communication, information, work	Internet/computer: only at work and forced; Mass media: more important	
	Pantelis	The same as Antonios	Everyday	Entertainment, work-tool (e.g. setting up blogging sites)	Computer/Internet more important than mass media due to convergence	
	Anastasia	Radio, TV, Telephone, Newspaper, Computer, Internet	Frequently	Entertainment, communication, information	Balanced view: all types of media have a role in our lives	
	Kwnstantina	TV, Radio, Telephone, Computer, Internet	Everyday	Entertainment, communication, information, work	Internet/computer: only at work and forced; Mass media: more important	
	Michalis	TV, Radio, Mobile, Computer, Internet	Everyday	Entertainment, communication	Computer/Internet more important (for fun) than other media	

Table A.8-2 Media use: Internet non-user perspective

Non-users				
Theme	Media use			
Questions	Which media	How often	Purposes of use	Attitudes
Antonia				
Dimitrios	Mobile, Video Games, Computer	Everyday	Mobile texting, gaming for entertainment, computer for typing	He likes mobiles and video games, but uses computer for practical reasons only
Maria	Telephone, TV	Everyday	Relaxation & entertainment; Telephone for communication	TV: central role in her life; telephone: important for communication only
Konstantinos	TV; not much Radio, Telephone and Newspapers	Everyday	TV for news and socially-sensitive programmes; Newspapers for sports	TV is his favourite medium; other media do not seem to play much role
Andreas	Newspapers, Radio, Phone/Mobile and Computer; not much TV	Everyday	Newspapers & radio for news. Phone/mobile for communication. Computer for work-related use	Against TV, arguing that it offers superficial and not reliable information
Dionysia				
Ioannis	TV, Radio, Mobile, Computer	Everyday	TV for news and relaxation. Mobile phone for work and communication. Computer for work	Very beneficial for work and communication
Evangelia	TV, Mobile, Computer	Everyday	TV for relaxation. Mobile phone for communication. Computer for work	Very important for work, communication and information; hard to compete with others without media
Anna	Newspapers, no that much Mobile, TV	Everyday	Newspapers for information. Mobile phone for communication with family. TV for news and comedy programmes	Critical to the media; good and bad media; reference to the past and traditional lifestyle
Petros	Newspapers, Computer, TV	Everyday	Newspapers for relaxation and information. TV for news and information. Computer for work	Important for life
Menios	Newspapers, TV	Everyday	Newspapers for sports. TV for sports and news	Media is a habit that pleases him, but not of critical importance for his life

Table A.8-3 Internet use: user perspective

		Users							
Theme		Internet use							
Questions	The Internet and how it is understood	Frequency of use	Activities and purposes of use	Reasons for use	Concerns during use	Dealing with concerns	What if deprived of use	Role of the Internet in everyday life	
1st group	Stefanos	Fascinating & wide scope of activities	Everyday	Important for life; work-related purposes	Work	Security risks (viruses, spam etc)	Security tools (antivirus etc)	Very bad impact	Important in general: integral part of daily life
	Myriam	Fascinating & wide scope of activities	Everyday	Important for life; work-related purposes and then entertainment & communication	Work (studies), entertainment & communication	Security risks (virus, spam etc)	Security tools (antivirus etc)	Very bad impact	Important for work/studies but not critical for other activities
	Apostolos	Not interesting & only work-related scope of activities	5 days a wk	Not important for life; Work-related purposes	Work	No	No/not sure		Important for work only
	Agapi	Not interesting & only work-related scope of activities	Everyday	Not important for life; Work-related purposes	Work	Security risks (spam)		Bad impact on work	
	Ioanna	Not interesting & only communication activities	Every second day	Not important for life; communication	Communication (family reasons)			Good impact	Not important as such
	Petros	Fascinating & only communication/entertainment activities	Once a wk	Important for life; communication & entertainment	Communication & entertainment	No	Security tools (antivirus etc)	Very bad impact	Important for fun
2nd group	Antonios	Services to use or open software that is useful outside the Internet		Important for life; work, info, communication, software & content downloading	Work, communication, entertainment, knowledge	No	Security tools (antivirus etc)	Bad impact	Important in general
	Eirini	A space where I can search for information	5 days a wk	Important for life; work-related (e.g. info)	Work	No	No/not sure	Bad impact on work	Important for work only

Pantelis	System of networks where one can use or produce content, services & applications		Same as Antonios, set up sites, content & software production	Work, communication, entertainment, knowledge	No	Security tools (antivirus, etc)	Very bad impact	Important in general: integral part of daily life
Anastasia	Virtual rooms where people meet, discuss & create new networks	2-3 times a wk	Quite important; communication	Communication	Security risks (virus, spam, etc)	Security tools (antivirus, etc)	Bad impact on socialising	Important for communication
Kwnstantina		5 days a wk	Non-important for life; work-related (e.g. emails & info)	Work	No	No/not sure	Bad impact on work only	Important for work only
Michalis		Several times a wk	Important for life; communication & entertainment	Entertainment, communication	Security risks (virus/spam pop-ups)	Security tools (antivirus etc)	Bad impact	Important in general

Table A.8-4 Internet use: non-user perspective

Non-users						
Theme	Internet use					
Questions	The Internet & how it is understood	Reasons for non-use	Impact of non-use on everyday life	Likelihood of future use	Desire for future use	
3rd group	Antonia	Information source	No need (especially for work); lack of time and other activities	No	Probably not; at least in the near future	
	Dimitrios	Gaming, chatting	No need	Possible negative impact on sociability	Not in the near future, as he does not need it; possible in the long-term	
	Maria		Other priorities & no need; difficulty in use and lack of time	Not	No	
	Konstantinos		Difficulty in use	No	No	
	Andreas	Email, surfing	Lack of incentives; not chance and time to learn	Yes, significant for work	Yes, he intends to use it for work-related purposes	Yes for work-related purposes, as he finds the Internet very useful
	Dionysia		No need & online risks	No	Probably not, as it is not needed for the time being	
4th group	Ioannis	Information source, surfing gaming, download files, communication	No chance to learn; no need for work, thus no incentives	Possible loss of benefits for work and other activities	Possible in the future, as this would benefit his work	Yes for work-related purposes, as he finds the Internet useful
	Evangelia	Purchase of goods, information	Agrees with Ioannis; Lack of incentives	Possible loss of benefits for work, but online risks	Probably not, as not needed and concerns about online risks	Not in particular; no need and concerns
	Anna	Hardly controllable space with endless amount of material	Negative character and influence of Internet content; no need	No impact; impact only if her children use it	No, but her daughters may use it	No, she does not desire it
	Petros		No need; for young people only; dissociation from the Internet	No impact since no need	No	No, as no reason to become a user
	Menios	Risky - pornography etc	For young people only; no knowledge	No impact; doesn't keep an eye on his children's use	No	No, as no reason to become a user

Table A.8-5 Public discourses on Greek society

Users (1st + 2nd group)		Non-users (3rd + 4th group)		
Theme	Public discourses on Greek society			
Questions	Techno-phobic and traditional society	Ignorance and lack of awareness	Social inactivity	
1st group	Stefanos	Yes; problematises the issue; role of decision-makers, 'mentality', lifestyle & 'Greekness'	Yes and argues about individual responsibility; reference to mentality	Yes and argues about individual responsibility; reference to mentality
	Myriam	Not certain; problematises the issue; need for more education/training, information & infrastructure		
	Apostolos	Yes; problematises the issue; role of decision-makers & public administration	Yes but questions individual responsibility	Yes, but questions individual responsibility
	Agapi	Not certain; problematises the issue; deconstructs the discourse and asks why the Internet is a 'must'; raises issues of training	Yes but questions individual responsibility	Yes, but questions individual responsibility
	Ioanna		It depends	It depends
	Petros	Old people: yes; Young people: no	Yes and argues about individual responsibility	Yes and argues about individual responsibility
2nd group	Antonios	Yes, partly; problematises the issue; role of politics, culture, information, education	Yes, but questions individual responsibility	Yes, but questions individual responsibility
	Eirini	Not certain; problematises the issue; deconstructs the discourse and asks why the Internet is a 'necessity'	Yes, partly	
	Pantelis	Problematises the issue; role of policy, education, information & infrastructure	Yes, but questions individual responsibility	Yes, but questions individual responsibility
	Anastasia	Yes, to some extent; problematises the issue; relates technophobia to lack of awareness	Yes and raises the issue of generations/age	Yes, and raises the issue of generation/gap
	Kwnstantina	Not certain; problematises the issue; deconstructs the discourse and asks why she should use the Internet outside work since she does not need to do so	Yes, but differentiates Greece from other countries	
	Michalis			
3rd group	Antonia	Yes; problematises the issue; deconstructs the discourse; 'Greekness' and importance of history & tradition		Problematises the issue; deconstructs the discourse; 'Greekness' and 'uniqueness' as a possibly good thing
	Dimitrios	Problematises the issue; old generation techno-phobic due to media propaganda, over-protectionist family relations & ignorance	Yes, especially as far as old generations are concerned; link to over-protectionism of the Greek family	
	Maria	Problematises the issue; online risks for [her] children on the Internet		

			Problematises the issue; old people like to keep their traditions, against the rapid work & technology changes	
Konstantinos				
Andreas	No; problematises the issue; people are not informed; information, awareness & education needed	Yes; school, media & the state responsible	Yes, but it is not that the whole society is inactive. Lack of awareness is the driving force	
Dionysia	Problematises the issue; online risks for children on the Internet		Problematises the issue; too many things to deal with in everyday life	
4 th group			Yes, problematises the issue stressing the individualistic character of Greek society and the Greek state's inactivity	
	Ioannis	Yes; problematises the issue; role of lack of knowledge and incentives	Yes, training and education needed	
	Evangelia	Problematises the issue; more knowledge, information and incentives needed	Yes, more knowledge and information needed	
	Anna	Problematises the issue; importance of identity, traditions and values	Yes, but lack of information not a problem for those who do not want to use the Internet	Problematises the issue; issues of prioritisation and lack of interest
	Petros		Yes, but awareness and education not sufficient to change people's decisions	Yes, for things people are not interested in
	Menios	Problematises the issue; different needs and habits, as well as less knowledge of people in Greece		Problematises the issue; issues of lack of knowledge and interest

Table A.8-6 Internet regulation and policy: user perspective

Users									
Theme	Internet regulation and policy (R: Regulation; P: Policy)								
Questions	Internet R & P understood	National and EU R & P on the Internet	Importance of R & P	Where R & P are needed	Instances where authorities' help was needed	Where they go if in need	More or less R & P	Areas of satisfaction/dissatisfaction	
1 st group	Stefanos	R: Laws, legislation; P: More general, education, info, infrastructure	R: Same but laws not always apply in Greece; P: Same but policies not always apply in Greece	R: Important for user's security	R: Information and help	R: None	R: ISP in general; contact person if specific website; P: Nowhere	R: Neither	R: Neutral position; P: Dissatisfied: infrastructure & cost
	Myriam	R: Measures for user protection; P: Agrees with Stefanos		R: Important for user's security	R: Help with spam	R: DPA: privacy protection; P: University: training			R: Insufficiency; P: Dissatisfied: cost & public access
	Apostolos		P: same but policies not always apply in Greece						R: No opinion
	Agapi	R: Terms & conditions; P: Agrees with Stefanos	P: policies not always apply in Greece	R: Important for user's security	R: Help with website posts	R: Police, cyber crime unit, ISP: online posts; P: Prof. association: training			R: Lack of awareness, insufficient help provided; P: Dissatisfied: training
	Ioanna								R: No opinion
	Petros		R: complicated	R: Non-important & too restrictive	R: Nowhere (so far)		R: None	R: Nowhere (no need)	R: Less

Antonios	R: Rules, terms & conditions during use; P: Initiatives about funding & education	R: Do not know, but Greek authorities fail in general; P: Greece behind due to education, media & awareness	R: Important for users' activities & security; P: Important for use & market development	R: Users' security, but up to some extent	R: ISP: difficulties	R: ISPs	R: Stresses individual responsibility	P: Insufficiency; emphasis on awareness
Eirini	R: Rules and laws, but no specific knowledge	R: Do not know, but Greek authorities fail in general	P: Important for users	R: Users' security	R: None; role of unawareness;	R: Nowhere	R: More, but awareness as well	R & P: Lack of awareness;
Pantelis	R: Rules & laws for content, services & networks; P: Broader; initiatives for infrastructure	R: Internet difficult to regulate; Greece lags behind & authorities' liability P: Political omissions	R: Important for user's security; P: Important for Internet use & market development	R: Users' security; competition; infrastructure & networks	R: Colleagues: technical problem; P: authorities' sites about technological developments	R: Professional networks	R: More, but awareness as well; P: More & better, visible & efficient	P: Lack of visibility & efficiency
Anastasia		R: Do not know, but Greek authorities fail in general	R: Important, but do not affect users' decisions; P: Important for families/children	R: Users' security; children's safety			R: Do not know; P: Better policy	R: Invisible in everyday life/usage
Kwnstantina	R: Do not know	R: Do not know	R: Non-important	Users' security; children's safety	R: None; role of unawareness & lack of interest;	R: Nowhere	R: More	R: Lack of awareness
Michalis		R: Do not know, but ordinary people's responsibility	P: Important for cost of use	R: Free access to content	R: ISP: spam; no authority because of lack of awareness	R: ISPs		

Table A.8-7 Internet regulation and policy: non-user perspective

Non-users				
Theme	Internet regulation and policy (R: Regulation; P: Policy)			
Questions	Internet R & P understood	National and EU R & P	Role of R & P in the decision of non-use	Where R & P are needed
Antonia		R: Does not know, does not deal with politics, but blames politicians; P: Does not know; she thinks this is a question for users	R: Important if she had to use the Internet; P: Problematises the issue, arguing that these issues are for those need to use the Internet and not all need to use the Internet	R: Important for users' security
Dimitrios	R: Protection of user		P: Important role; Lack of social accountability of policy, making young people to learn everything on their own	R: Important to restrict those who make money on the Internet; users should not be subject to regulations P: Services, infrastructure & facilities
Maria		R: Does not know, but blames politicians; P: Does not know	R: No role in her decision of non-use; P: No role; this issue does not concern her, since she is not a user	R: Important for children's safety, but afraid that children do not know much
Konstantinos		R: Does not know, but blames the Greek state; P: Does not know, but tends to agree with Andreas	R: No role in his decision of non-use	
Andreas	R: Rules, laws & legislation about Internet content & services; P: Plans and strategies for diffusion/evolution of the Internet and for users' security	R: Not certain; assumes that laws in other countries are better than in Greece; P: No certain; assumes that policies in other countries are better than in Greece, explaining low diffusion in Greece	R: No role in his decision of non-use; P: Important role, as he lacks guidance & information	R: Important for those who are users; important for users' security; P: Important for incentives, training and information for those who want to use the Internet
Dionysia		P: Does not know, but tends to agree with Andreas	R: Important if she had to use the Internet; she doesn't know what regulation is; P: No role; this issue does not concern her, since she is not a user	R: Important for users' security

3rd group

Ioannis	R: Laws and legislation; P: Political initiatives, politics is about everything	R: Does not know about the Internet, but he knows that regulation in Greece lags behind other European countries' regulation; P: Assumes that, as Greece lags behind in the domains of innovation and development	R: No role, as he never thought of regulation before; P: Probably no role, but not absolutely certain in case he had been provided with more information about the Internet	R: Important for users' security; reference to issues concerning the accuracy of the information available online P: Important for information, awareness, training, education
Evangelia	P: Similar to regulation		R: No role, not the main reason; main reason is the lack of motivation and interest; P: No role, but it would be good if she had been provided with more education about the Internet	R: Important for users' protection; emphasis to online fraud and issues relating to online purchases P: Problematises the role of policy; important for the facilities and education given to young people
Anna	R: Laws, legislation, measures and formal rules; P: Agrees with Ioannis, management & initiatives to achieve political goals	R + P: Does not know about the Internet, but she challenges the Greek state's efficiency and the applicability of laws and policies in the country	R: No role, as she has pre-decided not to use the Internet; P: No role, but important in case her children use the Internet in the future	R: Important for users' security; reference to children P: Important for Internet access, need for use and cost of use
Petros			R: Agrees with Menios; this is something users can say more about; P: No role as the Internet is not of any interest to him	
Menios		R: Agrees with Ioannis and Anna, although not familiar himself	R: No, as he would not use the Internet even if he knew more about regulation; P: No role as the Internet is not of any interest to him	
Antonia	R: Laws and legislation; P: Political initiatives, politics is about everything	R: Does not know about the Internet, but he knows that regulation in Greece lags behind other European countries' regulation; P: Assumes that, as Greece lags behind in the domains of innovation and development	R: No role, as he never thought of regulation before; P: Probably no role, but not absolutely certain in case he had been provided with more information about the Internet	R: Important for users' security; reference to issues concerning the accuracy of the information available online P: Important for information, awareness, training, education

Table A.8-8 Public discourses on Internet regulation and policy

Users (1st + 2nd group)		Non-users (3rd + 4th group)					
Theme	Public discourses on Internet regulation and policy						
Questions	Failure to adopt EU Internet regulations & policies	Bureaucracy	Non-modernisation, delays & technophobia	More socially accountable regulations & policies needed	High cost of services & networks	Lack of infrastructure & services	
1 st group	Stefanos	Absolutely agreed		Absolutely agreed	Yes	Yes	Yes
	Myriam	Partly agreed; problematises asking 'why'					
	Apostolos	Absolutely agreed	Absolutely agreed	Absolutely agreed			
	Agapi			Absolutely agreed	Yes	Yes	
	Ioanna						
	Petros			Absolutely agreed			
2 nd group	Antonios		Absolutely agreed	Absolutely agreed	Yes, but emphasis on education & media		
	Eirini		Agreed, but questions whether this is wrong	Agreed, but questions whether this is wrong	Yes, but users to be given options		
	Pantelis	Agreed; this explains status in society and IT market	Absolutely agreed	Absolutely agreed	Yes, but more market-oriented policies as well		Yes
	Anastasia		Agreed, but the same in society	Agreed, but the same in society	Yes, but emphasis on new developments		
	Kwnstantina				Yes, but emphasis on users' protection		
	Michalis					Yes	
3 rd group	Antonia	Does not know		Greek public administration incompetent due to lack of meritocracy	Deconstructs the discourse; politicians are not interested in citizens	Does not know	
	Dimitrios	Absolutely agreed; Greek authorities' liability				Yes, comparing to the rest of Europe	

					Depends on personal financial status		
	Maria						
	Konstantinos	Does not know		Yes; more socially accountable policies for young people			
	Andreas Dionysia	Absolutely agreed; Greek authorities' liability	Absolutely agreed	Greek public administration slow and inefficient	Yes; training, information and help are needed	Depends on personal financial status Doesn't think so; no certain though	
4 th group							
		Ioannis	Yes; this can be seen in many other domains of policy and regulation	Absolutely agreed	Agrees; this is politicians' liability, as well as people's individualism and laziness	Yes; even if part of the society is reactive and negative to such policies	Yes; important if people cannot afford it Yes if look at other European countries
		Evangelia	She accepts it since it is argued by experts		Supports these cultural elements of the Greek public administration	Deconstructs the discourse; politicians are not interested in citizens	
		Anna	Yes; education is a domain where this can be seen	Absolutely agreed	Greek public administration non-modernised - people's liability	Yes; citizens should be more active, less passive and contribute to this	Yes; important if her kids are to use the Internet No sure, as no technical expertise
		Petros Menios			Supports these cultural elements of the Greek public administration		To consider if his kids are to use the Internet