EVALUATING THE QUALITY OF E-DEMOCRACY PROCESSES: AN EMPIRICAL STUDY IN THE GREEK CONTEXT

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ABSTRACT

Public Authorities and Government use Information and Communication Technologies (ICTs) as tools to improve interaction and communication with citizens, design new ways to access and participate in Public Authority's processes or public decision-making processes and share the responsibility of political decision processes, heading for a new democratic model, better than the actual i.e. the model of e-democracy. This paper analyzes e-democracy and presents the quality model to evaluate e-democracy using the "C2ST" framework for the quality of e-democracy i.e. a four dimensional quality framework for the delivery of e-services adjusted to the e-democracy models, and is comprised by the following dimensions: *coordination*, *control*, *sharing*, and *transparency*. The framework is validated through an empirical research conducted among Greek citizens. Additionally, the benefits of e-democracy and the obstacles to enhance its quality are identified and analyzed.

Key words: e-democracy, sectors of e-democracy, models of e-democracy, quality framework of e-democracy

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ABBREVIATIONS:

BP: Business Process

BPM: Business Process Management

ICTS: Information and Communications Technologies

NGO: Non Governments-Organisations

NPOs: Non profit organisations

PC: Personal Computer

PCA: Principal Component Analysis

RLA: Regional and local authorities

INTRODUCTION

Platon's philosophy and theory about the republic in ancient Athens is considered to be the foundation of the democracy upon which advanced post-monarchial industrial democracies were founded. To many, Athenian Democracy serves as a model for societal decision making in which all citizens are able to input their views and have an influence on policy[1] and the ideal is the belief that freedom and equality are sacred and the democratic participation in governance enhances human dignity[2].

In the early 1990s the emergence of a new medium – the Internet- offers the potential to (re) connect citizens to their decision-makers and raises high expectations of an advent of more Athenian-style democracies as its democratic potentialities such as its reach, speed, reduced costs, information richness, decentralization, absence of censorship, search engines and the rise of user-generated interactive platforms are glorified[3]. The Internet now offers the equivalent of the open space in which free men gathered in Ancient Athens to debate and decide on public affairs[4]. There is a shift from the Plato's ideal of individual citizen action and participation to the new political mean of communication, which facilitates the two-way communication and political participation, encourages interaction among citizens and public officials and provides a rich forum for discussion of contentious political issues[5]. Consequently, more and more nowadays it is argued that ICTs provide Public Authorities and Government with tools to improve interaction and communication with citizens, design new ways to access and participate in Public Authority's processes or public decision-making processes and share the responsibility of political decision processes, heading for a new democratic model,

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[1]Simon French and David Ríos Insua ,2010, *e-Democracy: The Road Ahead*, Springer Science and Business Media B.V. pp345-357

[2] Ling Lan, (2005), Enhancing e-Democracy Via Fiscal Transparency: A Discussion Based on China's Experience, *IFIP International Federation for Information Processing 2005*, page 58

[3]Yana Breindl, (2010), Critique of the Democratic Potentialities of the Internet:A review of current theory and practice, on line at www.triple-c.at, 8 (1): page 45

[4]Council of Europe, (2008), *E-democracy: who dares?*, The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008

[5]Milakovich Michael, (2010), *The Internet and Increased Citizen Participation in Government*, Journal of e-democracy & Open Government, 2 (1) : 1-9

better than the actual[6] i.e. the model of e-democracy.

The emergence of the model of e-democracy is beneficiary for all the stakeholders. First, for the citizens as they can express their views and make their own opinions as well as the ideas of the groups to which they belong, known to public, enhancing the bottom-up interaction, making communication more horizontal and plural and having a first-person voice in the political agenda, Second, for the political parties, as e-democracy contributes to the decrease of the democratic deficit, increasing the participation of mainly young people to the political process. Third, for the governments as they enforce the transparency and the accountability on public issues with the application of the model of open government with open data and open communication channels[7]. Transparent democratic exercise of power in electronic form is one of the main principles of e-democracy[8] as it is one of the main characteristics of good governance since it enhances trust in democracy, democratic institutions and democratic processes.

However, the implementation of e-democracy, despite the undeniable benefits, is not without barriers[9]. There are mainly institutional barriers as there may be such an increase in demand for e-democracy such as e-participation, e-voting that the administrations can not cope with it, meaning that there is lack of the appropriate political backing, lack of resources and organizational constraints for the application of e-democracy. Additionally it exists the digital divide between those who and those who are not connected to the internet, between people who do not have equal opportunities to their access to ICT due to their age, culture, habits. Legal barriers as e-democracy requires rules and regulations that need to have in the centre the citizen and be carefully balanced. The e-democracy process should protect above all the citizens' rights, their privacy and personal data as well as their intellectual property.

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[6]Lizarralde O.-Goikolea J.-Sagardui G.-Goikoetxea A., (2007), E-democracy factors and IT-Governance factors for a best implementation of e-democracy projects and strategies n public authorities FACTORS IADIS, Vol.5,pp58-71 (accessed March 26, 2011)

[7]Peña-López, I. (2010). "Goverati: e-Aristocrats or the delusion of e-Democracy". In Parycek, P. & Prosser, A. (Eds.), *EDem2010. Proceedings of the 4th International Conference on E-Democracy*, 23-39.Keynote speech. Wien: Österreichische Computer Gesellschaft. Retrieved 13/03/2011 from http://ictlogy.net/articles/20100506_ismael_pena-lopez_-_goverati_e-aristocrats_delusion_e democracy.pdf

[8]Council of Europe (2009), Directorate General of Democracy and Political Affairs, Directorate of Democratic Institutions, Project: "Good governance in the information society", Indicative Guide No. 5 Recommendation of Committee of Ministers to member states on e-democracy.

[9]Council of Europe, (2008), *E-democracy: who dares?*, The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008.

However, regardless the barriers, e-democracy is above all about democracy and not simply about technology. Its main objective is the electronic support of democracy. Its main objectives is to support democracy, democratic institutions and democratic processes and to contribute to the spreading of democratic values[10]. E-democracy, undoubtfully, is an uprising subject that many researchers have approached it focusing mainly on the analysis of the sectors of e-democracy such as e-participation[11], e-consultation[12], e-voting[13].

In this paper it is made an attempt to shed light on the e-democracy generally and on aspect of the evaluation of the quality of e-democracy. In the chapter 1 are presented the various definitions of e-democracy, the sectors of e-democracy, the models of e-democracy, the principles of e-democracy, the benefits and the obstacles of e-democracy's implementation, the quality of e-democracy and the quality framework to evaluate e-democracy using for first time, the "C2ST" framework for the quality of e-democracy i.e. a four dimensional quality framework for the delivery of e-services adjusted to the e-democracy models. In chapter 2, it is explained the methodology used while in the chapter 3 is presented in the survey analysis and in detail the findings of the questionnaires' analysis. In the last chapter the conclusions of this research are presented and the reasons for a further research of e-democracy.

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[10]Council of Europe (2009), Directorate General of Democracy and Political Affairs, Directorate of Democratic Institutions, Project: "Good governance in the information society", Indicative Guide No. 5 Recommendation of Committee of Ministers to member states on e-democracy.

[11]Cartwright D. and Atkinson K.(2009), Using computational argumentation to support e-participation. *IEEE Intelligent Systems*, 24(5): 42-52

Macintosh, A (2008) E-Democracy and E-Participation research in Europe in *Digital Government:E-Government Research, Case Studies and Implementation*, Vol.17, UnitI,85-102

Peristeras V. et al., (2009). *Transforming E-government and E-participation through IT*, IEEE Intelligent Systems, 24 (5), 14-19.

[12]Stephens, S., Mccusker, P., Logue, A.M. & O'donell, D. 2006. "*On the road from consultation cynicism to energising e-consultatio."*. Paper presented at the *6th European Conference on e-Government*, Marburg (Germany). Academic Conferences Limited.

Nijland N, van Gemert-Pijnen JE, Boer H, Steehouder MF, Seydel ER. (2009)Increasing the use of e-consultation in primary care: results of an online survey among non-users of e-consultation. International Journal of Medical Informatics, 78 (10): 688–703

[13]Backes M, Hritcu C, and Maffei M . (2008) Automated Verification of Remote Electronic Voting Protocols in the Applied Pi-Calculus, *Proceedings of the 21st IEEE Computer Security Foundations Symposium*, IEEE Computer Society, Washington DC, USA, 195-209.

Spycher O. and Haenni R. (2010), A novel protocol to allow revocation of votes in a hybrid voting system, *Proceedings of the 9th Annual Conference on Information Security* , Sandton, South Africa.

Chapter 1

E-DEMOCRACY

1.1. Internet and Democracy

There have been many theories concerning democracy, as it is an evolving concept; the word derives from the two Greek words: demos (the people) and ktatia (rule), proving in that way that the Greek city states in the 6th century BC was the first democratic forms of government[14]. Platon's philosophy and theory about the republic in ancient Athens is considered to be the foundation of the democracy upon which advanced post-monarchial industrial democracies were founded. Athenian Democracy was an "elitist" form of citizenship with representatives who met weekly to decide legislative issues after consulting with citizens, concepts of citizen participation and representative democracy have evolved with democratic principles as societies have become more complex[15]. To many it serves as a model for societal decision making in which all citizens are able to input their views and have an influence on policy[16] and the ideal is the belief that freedom and equality are sacred and the democratic participation in governance enhances human dignity[17].

In the early 1990s the emergence of a new medium – the Internet- offers the potential to (re) connect citizens to their decision-makers and raises high expectations of an advent of more Athenian-style democracies as its democratic potentialities such as its reach, speed, reduced costs, information richness, decentralization, absence of censorship, search engines and the rise of user-generated interactive platforms are glorified[18]. In nowadays, the feeling of freedom and democracy that flourished in Pericles' Athens, must be recreated. It is acceptable that

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[14]Ling Lan, (2005), Enhancing e-Democracy Via Fiscal Transparency: A Discussion Based on China's Experience, *IFIP International Federation for Information Processing 2005*, page 57

[15]Milakovich Michael, (2010) The Internet and Increased Citizen Participation in Government, *Journal of e-democracy & Open Government* 2 (1), 1-9.

[16]Simon French and David Ríos Insua (2010, *e-Democracy: The Road Ahead*, Springer Science and Business Media B.V. pp345-357

[17]Ling Lan, (2005), Enhancing e-Democracy Via Fiscal Transparency: A Discussion Based on China's Experience, *IFIP International Federation for Information Processing 2005*, page 58

[18]Yana Breindl, (2010), Critique of the Democratic Potentialities of the Internet:A review of current theory and practice, on line at www.triple-c.at, 8 (1): page 45

the size of modern European cities makes direct participation in public affairs more difficult. Nevertheless, it is at countries' disposal, a number of information and communication technologies that makes it possible to increase the number of people involved in decisions and to overcome many of the limitations of space and time. The Internet now offers the equivalent of the open space in which free men gathered in Ancient Athens to debate and decide on public affairs[19] .

Thus, the Internet can be called a democratic technology, suggesting that it is inherently democratic[20] as (1) Democracy means power in the hands of individuals (the many), (2) information is power, (3) the Internet makes vast quantities of information available to individuals, (4) therefore the Internet is democratic[21]. However, it exists an absence of knowledge about the connection between technology and democracy as technology simply is related to direct democracy, ignoring the need to understand how IT actually does influence democracy[22]. Nevertheless, it is noted a shift from the Plato's ideal of individual citizen action and participation to the new political mean of communication, which facilitates the two-way communication and political participation, encourages interaction among citizens and public officials and provides a rich forum for discussion of contentious political issues[23].

The political use of the Internet is based on three axes that are the following: the first axis focuses on information and the model of an "informed citizen", is central to liberal democratic thought. Information is prerequisite for any political participation. The second axis is discussion and debate that relies on the model of an "active citizen" which is linked to deliberative democratic systems and refers to the citizen who shapes its political opinion when at the first place shares its thoughts with the thoughts of other citizens or representatives in a public sphere or with the thoughts of other citizens or representatives in a public sphere or agora. The third axis

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[19] Council of Europe, (2008), *E-democracy: who dares?*, The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008

[20]Johnston Paul, (2010),*Transforming Government's Policy –Making Processes*, JeDEM 2 (2):pp 162-169

[21]Stahl, B. C., (2005), "*The Paradigm of E-Commerce in E-Government and E-Democracy" in Electronic Government Strategies and Implementation*, Wayne Huang, Keng Siau & Kwok Kee Wei (Eds), Idea Group Publishing, Hershey PA, pp5-6

[22]Council of Europe, (2007), *Four models of eDemocracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE), Strasbourg, 8-9 October 2007.

[23]Milakovich Michael (2010), *The Internet and Increased Citizen Participation in Government*, Journal of e-democracy 2 (1) : page 2

is this of mobilization meaning that citizens need to participate more or less directly in the political decision-making. This is the model of "participative citizen" which is linked to participative democratic thoughts. It should be mentioned that all three axes are based on an idealized model of democracy (liberal, deliberative or participative) [24].

Generally, democracy models could offer a great explanation of the link between ICT applications and the context they are in, thus improve the opportunity to develop well-designed services. Deep understanding of the models could make easier to understand various objectives and the communication of these indentified objectives to potential participators could improve the potential impact. Then objectives, not technologies, could guide the development of e-democracy services[25].

1.2 Definitions of e-democracy

There are many multiple definitions for e-democracy with different perspectives and goals though it should mentioned that there is remarkable evolution from the first to the last definitions as the first definitions focused on the technology-the so called collaborative platforms-while the last on principles and values like active citizen's participation and the support and development to communities.

E-democracy can broadly be described as the use of new information and Communication Technologies (ICT) to increase and enhance citizens' engagement in democratic processes[26]. According to the Council of Europe e-democracy could be described as the use of ICTs by different actors within the political processes of local

[24]Yana Breindl,(2010),*Critique of the Democratic Potentialities of the Internet:A review of current theory and practice*, on-line at www.triple-c.at, l8, (1): p 51

[25]Council of Europe, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE), 2007,Strasbourg, 8-9 October 2007, Four models of eDemocracy, p.2

[26]Milakovich Michael, (2010) *The Internet and Increased Citizen Participation in Government,* Journal of e-democracy 2 (1) : page 1

Shirazi F., Ngwenyama O., and Morawczynski O. (2010), ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy, Telematics and Informatics, 27(1), 21-31.

Parliamentary Office of Science & Technology,*postnote January 2009* Number 321 eDemocracy Pg 1

Yigit E.O., and Colak K. (2010), The opinions of the pre-service teachers about e-democracy in Turkey, *Procedia – Social and Behavioral Sciences*, 2(2), 712-716**.**

Cecez-Kecmanovic, Kennan, Hull & Nagm, (2009), *Youth Participation in a Government Program: Challenges in E-Democracy*, 20th Australasian Conference on Information Systems, Melbourne, page:733

communities, regions, nations or the international level[27]. By using the ICS tools such as the internet and mobile sms it is given the opportunity not only to carry out more effective work and organize it better but also to reach those who do not normally participate in political life. In a bottom-up perspective, citizens and organisations can use the ICTs as resources to get their voice heard, parties use them for campaigning and governments and administrations to improve the services they are delivering to citizens by introducing electronic ways for petition or consultation.

In 2004, the conference of chairpersons of the legislative federal state parliaments of Europe [28] agreed on the following definition:

"New technologies (ICTs) and communication in practice are extraordinarily useful for the RLAs in promoting the TRANSPARENCY of our activities, stimulating the PUBLIC'S INTEREST in what happens in parliament and in offering the public mechanisms to FOLLOW our decision-making processes and PARTICIPATE in them. By using technologies in this fashion we believe that they will contribute to the improvement of our democracy's quality and ADD VALUE TO THE ROLE THAT OUR INSTITUTIONS are currently carrying out and, in short, foster EFFICIENCY and EFFECTIVENESS in public policy".

In 2006, the definition given by ePlanIT, Local e-Democracy National Project in Great Britain[29] as regards e-democracy is the following: *"e-Democracy is the use of ICT (Information and Communication Technologies) including the Internet, mobile technologies and interactive digital television to create new deliberative discussions between government and its citizens and between citizens themselves. It complements traditional methods of community engagement such as public meetings and workshops so therefore it should not be viewed as a different model of democratic governance. Rather its aim is to: enhance community outcomes, build capacity and skills, encourage participation from communities and groups who are not currently actively engaged in government processes, helps communities engage with each other, enables*

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[27]Council of Europe (2009), Directorate General of Democracy and Political Affairs, Directorate of Democratic Institutions, Project: "Good governance in the information society", Indicative Guide No. 5 Recommendation of Committee of Ministers to member states on e-democracy.

[28]Lizarralde O., Goikolea J., Sagardui G., and Goikoetxea A. (2007), E-democracy factors and IT-governance factors for a best implementation of e-democracy projects and strategies in public authorities, *IADIS International Journal on WWW/Internet*, 5(2), 58-71.

[29]ibid:p 61

two way consultation and exchange of views and promotes information sharing".

Clift introduces the definition based on the wider range of the stakeholders involved in the implementation of e-democracy as he argues that "e-democracy is the use of information and communications technologies and strategies by "democratic sectors" within the political processes of local communities, states, regions, nations of and on the global stage". The "democratic sectors" mentioned, are the following:

-Governments

-Elected officials

-Media (and major on-portals)

-Political parties and interested groups

-Civil society organizations

-International governmental organizations

-Citizens-voters [30.]

Terry Davis[31], on the other hand, claims that "there is no such thing as electronic democracy as there is no such thing as paper democracy but democracy is simply democracy" meaning that what the new information technologies have changed is the environment in which the democracy takes place. It makes no difference whether the citizen cast its vote with its hands or through the internet.

Ben Li, on contrary, claims that what modifies the new term e-democracy from democracy is the prefix shorthand for "electronic". Being electronic (digital or on-line) is not only *a relevant* difference but is *the relevant and fundamental* difference[32] and providing a decision-making tool alongside democracy.

Compared to the e-government, e-democracy is defined as the use of ICT in aspects of legislative and judiciary political processes in democracy while e-government is the use of ICT for the purposes of the executive branch of government[33] . It can be argued that the purpose of the implementation of e-government is the delivery of government

[30]Clift S.L. (2004), e-Government and democracy – Representation and citizen engagement in the information age, online at http://www.publicus.net/articles/cliftegovdemocracy.pdf/accessed 11.03.2011.

[31] Council of Europe, (2008), *E-democracy: who dares?,* The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008

[32]Li B. (2010), To "e-" or not to "e-" – Re-locating innovation in "electronic" decision-making, *Journal ofeDemocracy*, 2(2), 145-161

[33]Stahl, B. C. (2005) "The Paradigm of E-Commerce in E-Government and E-Democracy" in *Electronic Government Strategies and Implementation*, Wayne Huang, Keng Siau & Kwok Kee Wei (Eds), Idea Group Publishing, Hershey PA, page 5

services and information to the public using electronic means while e-democracy aims to make citizens able to communicate with government, participate in the governments' policy-making and at the same time citizens are able to communicate each other and to participate in the democratic political process.

1.3 Sectors of e-democracy

According to the Recommendation CM/Rec(2009)1 of the Committee of Ministers to member states on electronic democracy[34], e-democracy includes e-parliament, e-legislation, e-justice, e-mediation, e-environment, e-election, e-referendum, e-initiative, e-voting, e-consultation, e-petitioning, e-campaigning, e-polling and e-surveying, while it makes use of e-participation, e-deliberation and e-forums. According to the Recommendation mentioned above each of the sectors is analyzed as below:

Table 1: Sectors of e-democracy

Sectors of e-democracy
•e-voting •e-participation
•e-consultation •e-environment
•e-legislation •e-parliament
•e-justice •e-mediation
• e-initiatives •e-petitioning
•e-campaigning • e-polling/ e-surveying

E-parliament is considered to be the use of ICT by elected representative assemblies, their members and political and administrative staff in the conduct of their tasks, in

[34] Council of Europe, (2009), Directorate General of Democracy and political affairs, Directorate of Democratic Institutions, Project: «Good governance in the information society», Indicative Guide No.5 Recommendation of Committee of Ministers to member states on e-democracy.

particular for the purposes of actively involving citizens. E-parliament concerns legislative, consultative and deliberative assemblies at international, national, regional and local level; members of parliament, political and administrative staff, electors, citizens, and the media , all participate in e-parliament.

E-parliament encompasses, *inter alia*, aspects of e-legislation, e-voting, e-petitioning and e-consultation, and can make for better information and improved management of communication with members, staff and administration, and for contact with citizens.

While e-parliament supports the principle of representative democracy, it can provide tools for changing the culture of representation in such a way as to ensure a more inclusive, deliberative and participatory form of democracy.

E-legislation is the use of ICT for drafting, commenting on, consulting, structuring, formatting, submitting, amending, voting on and publishing laws passed by elected assemblies. It makes legislative procedures more transparent, improves the content and readability of legislation, provides better access to it, and thereby enhances public knowledge of the law.

E-justice is the use of ICT in the conduct of justice by all stakeholders of the judiciary in order to improve the efficiency and quality of the public service, in particular, to individuals and businesses. It includes electronic communication and data exchange, as well as access to judicial information.

As the judiciary is a key component of democracy, e-justice is an essential facet of e-democracy, its main goal being to improve the efficiency of the judicial system and the quality of justice. Access to justice is one aspect of access to democratic institutions and processes.

E-mediation is the use of ICT to find means of resolving disputes without the physical presence of the opposing parties: e-tools can serve as mediators.

E-environment is the use and promotion of ICT for the purposes of environmental assessment and protection, spatial planning, and the sustainable use of natural resources, and includes public participation. Using ICT to introduce or enhance public participation can improve democratic governance in respect of environmental issues.E-elections, e-referendums and e-initiatives are political elections, referendums or initiatives in which electronic means are used at one or more stages.

E-voting is an election or referendum that involves the use of electronic means in at least the casting of the vote. Remote e-voting speeds up procedures, enables voting to

be electronically monitored and votes electronically registered, and facilitates participation from greater distances and by persons with special needs.

E-consultation is a way of collecting the opinions of designated persons or the public at large on a specific policy issue without necessarily obliging the decision maker to act in accordance with the outcome. There are various forms of e-consultation, formal and informal, public-authority-regulated and unregulated.

E-consultation can invite and collect various opinions whilst providing an inclusive space for deliberation or for simply following the debate; it allows decisions to be directly or indirectly influenced.

E-initiatives allow citizens to develop and put forward political proposals by means of ICT and thus engage in political agenda setting.

E-petitioning is the electronic delivery of a protest or recommendation to a democratic institution: citizens sign a petition and possibly engage in a discussion on the subject by putting their names and addresses online. As is the case with petitions to parliament in general, e-petitions take various forms. E-petitions facilitate citizen input to parliament and other democratic institutions and discussion and deliberation among citizens.

E-campaigning is engaging by electronic means with people in a co-ordinated way and encouraging people to engage with one another in order to mobilise individuals in electoral and other campaigns and/or persuade them to promote a particular cause, in an endeavour directly or indirectly to influence the shaping or implementation of public policy. E-campaigning includes e-electioneering, that is, e-campaigning in connection with elections, and e-advocacy, that is, e-campaigning in connection with other issues.

E-polling/e-surveying allow opinions to be obtained informally, by electronic means, from random or selected persons, usually in connection with a proposal and a set of possible responses.

1.4 Models of e-democracy

The models of E-democracy are frameworks that relate the use of technology to the various forms of political organizations, mainly emphasing on the impact of ICT on processes of democratic decision-making. In the theoretical literature review, the following models of e-democracy are presented:

1.4.1. The four e-democracy models

The implementation of the four e-democracy models is based on the use of different ICT applications, like e-mail, chat systems, blogs and discussion forums for various e-democracy purposes. The existence of different ICT applications and the choice of a particular technological system (like a discussion forum) does not indicate development of the democracy in one specific direction. The development is dependent on how major stakeholders use the service. Insights on contextual factors, like stakeholders' views and the connection between decision making processes and eDemocracy services, is needed to be able to plan, design and implement new services[35].

Four E-democracy models are categorized based on two fundamental characteristics[36]: inclusion in decisions and control of the agenda. Inclusion means that all adults who belong to a society should be allowed to participate in political debates and to be involved in decision-making processes. Control of the agenda deals with the issue of who decides what should be decided on. In particular, this gives the right to the citizens to raise issues and to actively participate in decision- making processes.

The four e-democracy models[37] are presented in detail in the table 2:

[35]Council of Europe, (2007), *Four models of e-democracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE),Strasbourg, 8-9 October 2007.
[36]ibid:p.2
[37] Päivärinta & Sæbø (2006), *Defining the "E" in E-Democracy: a genre lens on IT artefacts* , available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.94.3334&rep=rep1&type=pdf accessed at 08.03.2011

	Partisan E-democracy	Direct E-democracy
Citizens set the agenda	Citizens express bottom-up opinions and critique existing power structures. No explicit connection to the existing government or political decision-making processes is defined beforehand. Citizens set the agenda for public discussions, but not for decision-making. ICT seeks to obtain visibility for alternative political expressions uninterrupted by political elite.	Citizens participate directly in decision-making processes. The citizens are online affecting the decisions to be made (mostly at the local level). Citizens set the agenda for both public discussion and decision-making. ICT is a crucial pre-condition for democracy to support coordination among decision makers.
	Liberal E-democracy	**Deliberative E-democracy**
Government (politicians and officers) set(s) the agenda	Government serves citizens who participate in elections and related debates. Government would like to inform and be informed by the citizens. There is no clear connection to decision-making activities. ICT seeks to improve the amount and quality of information exchange between government and citizens.	E-Democracy projects are used for specific purposes, involving citizens in public decision-making processes. Citizens have good reason to expect that their voices are heard concerning a particular matter. ICT is developed for increased citizen participation and involvement in decision-making processes.
	Citizens are implicitly included in decision-making processes	*Citizens have an explicitly defined role in decision-making processes*

Table 2. Models of E-democracy, (Source; Päivärinta & Sæbø,2006)

Liberal e-Democracy

Liberal e-democracy is characterised by the fact that the government sets the agenda for decision-making processes and the citizens participate implicitly in decision-making processes[38]. E-democracy services for liberal E-democracy are summarised in the table 3[39]

[38]Council of Europe, (2007), *Four models of eDemocracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE), 2007,Strasbourg, 8-9 October 2007, p.2
[39]Päivärinta & Sæbø (2006), *Defining the "E" in E-Democracy: a genre lens on IT artefacts* , available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.94.3334&rep=rep1&type=pdf accessed at 08.03.2011

ICT application	Activity and purpose
Discussion forums	Increasing interactive communication between citizens and politicians for information exchange, not decision making purposes
Dialogue system	Citizens express suggestions and ideas as input to decisions made by politicians
Information broadcasting	To bring information from elite to citizens (top-down)
Governmental homepages	To inform citizens about timely issues.
E-Debates between candidates	Broadcast debates between politicians to inform the electors
Information portals	One stop access point for citizens to achieve information
Consultation	Government/ politicians are able to respond to citizen's questions.
Candidate/ campaigning websites	Promote a candidate or a case

Table 3: eDemocracy services for Liberal Democracy, (Source: Päivärinta & Sæbø,2006)

The objective is to inform, get input from the citizens and to get in touch, but still in with a classical politician – citizen relationship[40]. Liberal democracy is based on the representative government where citizens form the electorate, participate in public debate and authorise representatives at the local level. In Liberal e-democracy, the majority rule protects the population from random government[41] and aims for more and more input into the on-going decision-making processes by the citizens.

Deliberative e- democracy

Deliberative E-democracy connects citizens more explicitly and directly to decision-making processes, emphasing the role of open discussions. This is the form of representative democracy where the legalisation of power is constituted by the input and cooperation between citizens and politicians[42]. Politicians and citizens share ideas through the dialogue and discourse which then leads to the formation of public political opinion. The information technologies are developed with the aim of enhancing citizen participation and involvement in political decision-making apart from just casting votes in elections and participating in electoral campaigns[43].

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[40] Päivärinta & Sæbø (2006), *Defining the "E" in E-Democracy: a genre lens on IT artefacts* , available at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.94.3334&rep=rep1&type=pdf accessed at 08.03.2011

[41] Council of Europe, (2007), *Four models of e-democracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE),nStrasbourg, 8-9 October 2007, p.2

[42] Ibid: page 4

[43] Ibid: page 4

It is widely accepted that the True Deliberative E-democracy implementations with explicitly defined relationships to the actual decision-making processes may increase the level of citizen participation.

The eDemocracy services for Deliberative eDemocracy are summarised in table 4

ICT application	Activity and purpose
Discussion forum (issue-based), E-Docket	Initiating, drafting and defining political issues, following up decisions
Invitation to submit suggestions	To inform citizens that they can submit suggestions to municipality
(e-) Referendum	To inform decision-makers about citizens' view on a particular issue. Often "for information"
Homepages	To inform citizens about timely issues and to educate them on possibilities for deliberative democracy.
On-line transmissions of meetings	To make decision-processes transparent, to follow-up decision-making of representatives
Citizen panel / "jury"	Getting information from a sample of citizens concerning a specific issue.
On-line questionnaire / Survey	Getting opinions from citizens on particular issue
E-voting / Membership ballot	Getting opinions from citizens / members of a community on particular issues.
"Your question"	Citizens can ask questions from politicians
Public opinion messages	Citizens express their opinions on legislation or local politics, transparency on whether public opinion has been followed on an official form
Real-time chat, Group-to-group chat	Citizens can contact politicians on-line to discuss about issues
Closed discussion forum	Party members can affect opinion within a party.
Expert panel	Collecting viewpoints from targeted debates to decision-makers
Formal consultation report	Choosing appropriate background documentation for a targeted debate
Feedback about targeted discussions	Informing discussants, which representative has been informed and how the discussion affects the decisions.

Table 4: eDemocracy services for Deliberative Democracy (Source:Päivärinta & Sæbø, 2006)

Direct e-democracy

The model of direct e-democracy represents a radical alternative to representative models of democracy[41]. The role of traditional institutions goes to network-based groups and individuals. ICTS play a decisive role as the Internet is

[44]Council of Europe, (2007), *Four models of edemocracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE),Strasbourg, 8-9 October 2007, p.4

not only a supplement to traditional communication channels but is a crucial pre-condition for democracy[45]. A direct E-democracy initiatives requires communication technology to support coordination between a great number of decision makers (i.e. citizens) who are possibly geographically scattered and who come from diverse backgrounds[46].

The eDemocracy services for Direct Democracy are summarised in table 5

ICT application	Activity and purpose
User Registration	To join the Internet party and to get rights to act in the community
Open discussion/ idea forum	To raise new issues by the citizens and discuss about them
Decision-making on issues to be debated	To decide, which issues are to be debated and voted further, so that the representatives can raise the issue in the municipal board
Targeted debate forums (before particular decisions)	To discuss about issues rose for formal discussion.
Background documentation of issues	To inform the users about timely issues and the, decisions taken.
E-Voting	Telling the party representatives how to act in the municipality council

Table 5: eDemocracy services for Direct Democracy (Source:Päivärinta & Sæbø, 2006)

Partisan E-democracy

Partisan E-democracy projects allow the citizen-initiated participation and the implicit citizen involvement in the decision –making process[47] without being explicitly connected to the existing government. ICTS offer alternative channels of communication that would promote openness for political expression and criticism without the intervention from the political elite. New voices in the political field that may express alternative ideologies, can strengthen Partisan E-democracy solutions even when the connection to the usual decision-making process remains implicit[48].

The eDemocracy services for Partisan E- Democracy are summarised in table 6

[45]Council of Europe, (2007), *Four models of edemocracy*, Directorate General of Democracy and Political Affairs,Ad hoc Committee on e-democracy (CAHDE),Strasbourg, 8-9 October 2007 , p.5

[46] Ibid:p.5

[47] Ibid:p.5

[48] Ibid:p.5

ICT application	Activity and purpose
Discussion forum	To provide a channel for expressing opinions otherwise gaining little or no visibility under the prevailing political system
Chat system	Synchronous system for short and fast messages. Not for long, contemplate messages
Information Portals	Provide either information on a particular case or with a particular view, or as much neutral information as possible
Newsgroups/Usenet groups	Asynchronous discussions, allow longer threads than chat since the time issue is not that present when messages are not in real time
Mail-based discussions	Asynchronous discussions differ from others by introducing a push-technology by sending mails to participants.
Web Blogs	Broadcast it's own views

Table 6: eDemocracy services for Partisan Democracy, (Source:Päivärinta & Sæbø, 2006)

1.4.2. The model of the OECD

The Organisation for Economic Co-Operation and Development (OECD)[49] defines three types of e-democracy:

Information: a one-way relation in which government produces and delivers information for use by citizens. It covers both 'passive' access to information upon demand by citizens and 'active' measures by government to disseminate information to citizens. Examples include: access to public records, official gazettes, government web sites.

Consultation: a two-way relationship where citizens provide feedback on government's issues as citizens take part in consultations initiated by the local authorities or the government with the aim of enhancing the community involvement in democratic process. Examples of this type of e-democracy are the public opinion surveys and comments on draft legislation.

Active participation: a partnership relationship with government, where citizens are involved actively in the decision- and policy-making process. It is acknowledged the role of citizens in proposing policy options and shaping the policy dialogue – even though the final decision rests on government.

1.4.3. The Coleman and Gotze' s model

Coleman and Gotze[50] refer to four scenarios. The first is technology supporting direct

[49]Organisation for economic co-operation and development, (2003), *Promise and Problems of E Democracy: Challenges of Online Citizen Engagement*, online at http://www.oecd.org/dataoecd/9/11/35176328.pdf / accessed 19.02.2011.

[50]Caldow J, (2004), *E-democracy: Putting down global roots*, on-line at: http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy, (accessed January 20, 2011).

democracy. The second encompasses on-line grass-roots civic communities of interest. The third addresses online surveys and opinion poll and the fourth points to technology as a way to engage citizens in policy deliberation.

1.4.4. The four-stage model of e-democracy

The institute of electronic development proposes a four – stage model of e-democracy that is not limited to the citizen-to-government point of view, mapping the four progressive scenarios from an informed to an engaged citizen[51]. It also serves as a scorecard of digital understanding-----how successfully a government entity (an elected representative, a legislative body, a political party) interprets and responds to the digital world and exploits technology accordingly to advance influence[52]. The "entity" mentioned may be an elected representative, a legislative body, a provincial or national government, a political party, or international organization. This model helps leaders think how to implement tactical and strategic e-democracy efforts into an overall e-government strategy.

At this point it should be clarified that the tactical side of e-democracy refers to the fact that information technology has advanced communication and the access to information arguably better than any known medium while the strategic side tries to give an answer to the question " *how can a government use digital media to both actively engage citizens and advances its public policies to the world community?"*[53]. Taking a look at this model, a government can identify its current position against characteristics at various sophistication levels and see what e-intiatives can take them to the next level. There are two axes: the one axis measures the degree of engagement and the other axis measures influence[54] ((table 7).

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[51]Caldow J, (2004), *E-democracy: Putting down global roots*, on-line at: http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy, (accessed January 20, 2011),p 4
[52] ibid:p4
[53]Caldow J, (2004), *E-democracy: Putting down global roots*, on line at :http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy, (accessed January 20, 2011),pp:1-11
[54]Lan L, (2005), Enhancing e-Democracy Via Fiscal Transparency: A Discussion Based on China's Experience, *EGovernment Towards Electronic Democracy*, 3416, 57-69.
Caldow J, (2004), *E-democracy: Putting down global roots*, http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy,(access January 20, 2011),pp:1-11

Quadrant two **Two way, Asynchronous Tactical**	Quadrant four **Interactive, Strategic**
E-mail On-line opinion polls On line surveys Email alerts Electronic voting methods	E-petition GLOBAL E-consultation Policy Diplomacy *Transparency* DOMESTIC Digital Divide
Quadrant One **Passive, One Way,Asynchronous**	**Quadrant Three** **Collaborative, Interactive**
Search information View web casts Track legislation Look-up representatives	Dynamic monitoring of news media & Internet Volunteer recruitment & coordination Fundraising Online forum

Engagement → Influence

Table 7. The four-stage model of e-democracy, Source:E-democracy:Putting Down Global Roots, (Caldow,2004)

Quadrant One

A fundamental step in e-democracy tactics for most government entities- governments, legislative bodies, international organizations, political parties- is to make information available on line. This can be measured, for example, by the frequency of the visits of web sites generally, the visits of government web sites from the citizens to search information for public policy issues such as information how to cast their votes. Legislatures have understood not only how to use technology to communicate with constituents but also how to operate as modern businesses taking advantage of technology[55].

Quadrant Two

Entities in this quadrant have made great efforts to open two-way

[55]Caldow J, (2004), *E-democracy: Putting down global roots*, on-line at: http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy,(accessed January 20, 2011),pp:1-11

communication. Every public institution and those who serve in them are obliged to move beyond information dissemination to open two-way communication channels relevant to the digital age in which we live[56]. The two-way communication includes the holding of on- line surveys and on-line polls, the use of e-voting methods and the sending of e-mail messages to the governmental bodies and the politicians.

Without any doubt, the entities that belong to this quadrant have achieved two-way capability, though its nature is still asynchronous meaning that a percentage of the governmental bodies do not respond, for example, to the citizens' demands.

Quadrant Three

Though it is still asynchronous, this quadrant extends interactive capability, meaning that communication begins to evolve into collaboration. Most visible in this stage are political players and the electoral process with tactics such as recruiting and organizing volunteers on line, on line fundraising, campaigning, communication with constituents and the media, voter registration and voting[57].

Quadrant four

It represents the highest level of e-democracy sophistication –strategic, interactive, synchronous and global in nature[58] .

Domestic Citizen Engagement

The earlier the citizens participate in the policy making cycle, the more likely they can influence the outcome. Five reasons are highlighted for the governments to promote public deliberation and include it into the constitutional process: (1) the improvement of the quality of policy by obtaining wider sources of expertise under conditions of increasing complexity; (2) the preparation for greater and faster interactions demanded by information society; (3) the integration of public input into policy making; (4) the response to calls for transparency and accountability; (5) the increase of trust in government[59].

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[56]Caldow J, (2004), *E-democracy: Putting down global roots*, on-line at http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy,(accessed January 20, 2011),page:6
[57]Ibid: p.6
[58]Ibid:pp:1-11
[59]Ibid:p 8

Global Positioning of Democracy

The internet knows no borders. There are numerous international websites addressed to activist groups, non government organizations, grassroots organizations and many others who use a variety of influence techniques[60]. Government entities have a lot to learn from these to improve domestic and foreign affairs, enhance security and promote democracy.

1.4.5. The Clift's conceptual model of e-democracy

The *Clift's conceptual model*[61] is depicted in fig.1 and is composed by five components: ICT, e-citizens, government, civil society and media.

E-citizens are individuals that use ICTs to participate in democratization process: Citizens through the internet can interact with social groups, political parties, government, and they succeed in that way the creation and the dissemination of information, increasing their participation in the debates and the social dialogue.

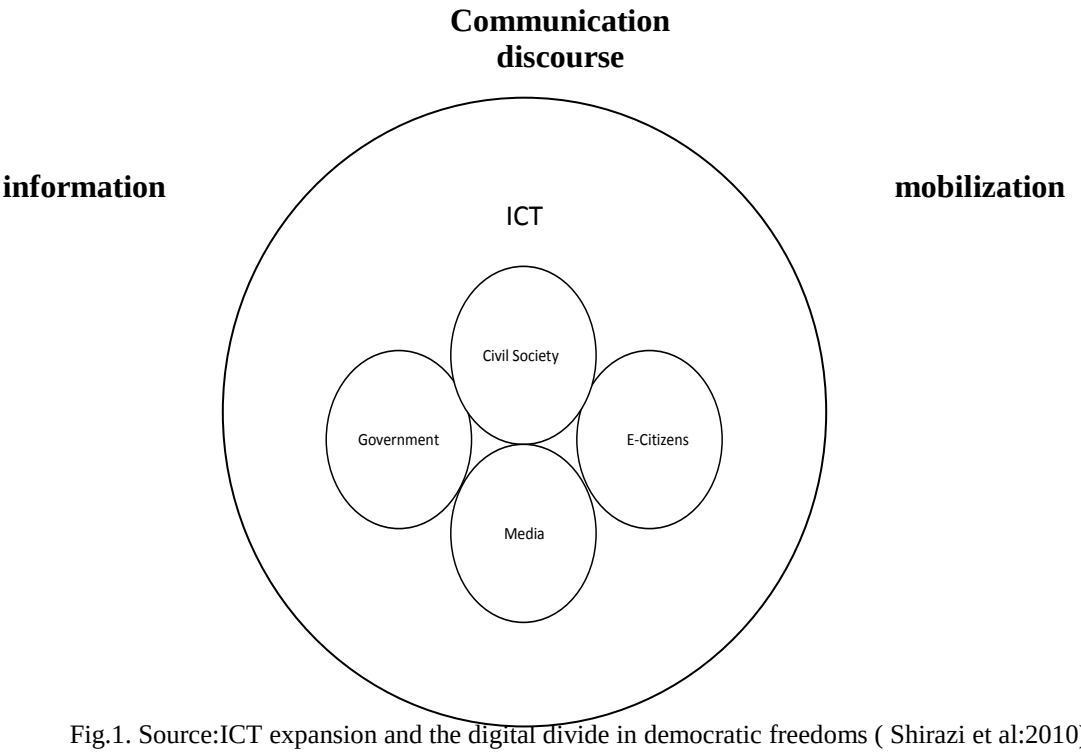

Fig.1. Source:ICT expansion and the digital divide in democratic freedoms (Shirazi et al:2010)

[60]Caldow J, (2004), *E-democracy: Putting down global roots*, on-line at: http://www-01.ibm.com/ industries /government/ieg/pdf/edemocracy,(accessed January 20, 2011),pp:10

[61]Shirazi F., Ngwenyama O., and Morawczynski O. (2010), ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy, Telematics and Informatics, 27(1), 21-31.

Civil society includes NGOs, women's groups, trade unions, political organizations that use ICTs with the aim of good governance and democratic development.

Government in this model represents e-government that provides citizens, civil society, private sector and media with excessive access to information electronically to support the functions that a government performs[62].

Media as ICTs have got the power to destabilize the control of the production and circulation of information held by the traditional media[63].

The ICTs possess an interactive comparative advantage compared to the traditional mass media as regards the establishment of communication between citizen and politics, providing the political communication with new means and enhancing at the same time the direct democracy[64].

1.4.6. The Gartner Dataquest's model of e-democracy

Gartner Dataquest has developed a four-stage model of "e-development" which applies to e-democracy as well[65]. Gartner Dataquest presents the following stages:

In the first stage (presence) the Internet site provides information on-line in a static format.

In the second stage (interaction) citizens search information, download forms, or access links to other relevant sites.

In the third stage (transaction) alleviates the need to complete a transaction by mail or make an office visit.

In the fourth stage, that is transformational, is characterized by the wireless access, making sites able to push government information to citizens and enhance customer relationship management tools.

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[62][61]Shirazi F., Ngwenyama O., and Morawczynski O. (2010), ICT expansion and the digital divide in democratic freedoms: An analysis of the impact of ICT expansion, education and ICT filtering on democracy, Telematics and Informatics, 27(1), 21-31.

[63] Ibid.

[64]Tongaridou and Lappas, (2010), *Members of European Parliament in Internet: Analysis of the members of European's Parliament 's Websites 2004-2009*, Proceedings of Congress on "ICTS implementation and methods of Administration", November 5th 2010, University of Macedonia, Thessaloniki.

[65]Caldow J, (2004),*E-democracy: Putting down global roots*, on line at: http://www-01.ibm.com/ industries/ government/ieg/pdf/edemocracy,(accessed January 20, 2011),pp:1-11

1.4.7. The e-democracy model of the European e-Democracy working group

The European e-Democracy working group for IT4ALL headed by CARLE and comprising eight European regional Parliaments with experience in e-Democracy projects has defined and analyzed the key factors[66] to support and enable E-democracy as below:

-COMMITMENT: It refers not only to the achievement of objectives but also to the formation of the basis on which the strategic design and the corporate culture of the representative institutions are supported. This includes the budgetary undertakings and the measures that the organizations should take and are linked to the specific values.

-TRANPARENCY: The public institutions are obliged to operate with openness and to facilitate participation of citizens in their decision-making processes.

-PROACTIVITY: The information and participation mechanisms that enable the new technologies should simplify the process of obtaining information and establish proactive services, while at the same time the organizations should provide original and complete information in real-time, arranged with the demand defined by the citizens and their organizations.

-MULTI-CHANNEL: The ICTs, are useful tools for the application of the principles of transparency, participation, openness in the decision-making process, though the possibilities offered by ICTS should be combined with those offered by the traditional means of communication (telephone, radio, television).

-TRAINING IN CIVIC VALUES: The public institutions should encourage the citizen participation in the decision-making processes by simplifying languages and procedures, giving maximum visibility to the results arising from civic contributions. Additionally training should be provided to the youngest in society in the culture of responsibility and participation.

Based on the above key factors , the e-democracy model with the key factors has been formed and can be viewed as an incremental process that is comprised by

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[66] Lizarralde O., Goikolea J., Sagardui G., and Goikoetxea A. (2007), E-democracy factors and IT-governance factors for a best implementation of e-democracy projects and strategies in public authorities, *IADIS International Journal on WWW/Internet*, 5(2), 58-71

the following stages[67]:

On an initial stage, services of openness and transparency are stressed as unidirectional services from Public Authorities to citizens.

On a second stage, pro-active services appear that promote bi-directional flow of information such as services to submit queries, suggestions and to consult, ask for advices, emit petitions etc.

On the last stage, services appear that promote dialogue and discussion among citizens, including deliberations on information needed as a basis for decision-making and suggestions to improve and encourage active citizen participation as citizens are able to decide by voting, consultation or a well structured referendum.

The repetition of this incremental process quarantee quality in the decision-making and the incorporation of citizens'participation[68].

1.5 Principles of e-democracy

The recommendation of the committee of Ministers of the council of Europe to the State Members on the e-democracy refers to the principles of e-democracy the State members of Europe should take account of when they apply e-democracy or take measures to improve it[69]. Similarly the 2008 Session of the Council of Europe Forum for the Future of e-Democracy has ended to the principles of e-democracy that each member state should take into consideration when applies e-democracy. The principles are as follows[70]:

- E-democracy is above all about democracy and not simply about technology. Its main objective is the electronic support of democracy. Its main objectives is to support democracy, democratic institutions and democratic processes and to contribute to the spreading of democratic values. It is additional, complementary to,

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[67]Lizarralde O.-Goikolea J.-Sagardui G.-Goikoetxea A., (2007*), E-democracy factors and IT-Governance factors for a best implementation of e-democracy projects and strategies n public authoritiesFACTORS* IADIS International Journal on WWW/Internet, Vol.5,pp58-71

[68]Ibid:p.62

[69]Council of Europe (2009), Directorate General of Democracy and Political Affairs, Directorate of Democratic Institutions, Project: "Good governance in the information society", Indicative Guide No. 5 Recommendation of Committee of Ministers to member states on e-democracy.

[70]Council of Europe, (2008), *E-democracy: who dares?,* The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008

and interlinked with traditional processes of democracy and it presupposes the existence of a basic democratic environment such as free and fair elections.

- E-democracy is based on and should respect the democratic, human, social, ethical and cultural values of the society in which it is implemented. Additionally, e-democracy can not implemented if there is no enjoyment of human rights in particular freedom of expression, open and secure access of all people to the Internet and the protection of citizens' privacy and personal data.
- E-democracy is closely linked to good governance that its main characteristics are the efficient, effective, participatory, transparent and accountable democratic exercise of power in electronic form. The goals of e-democracy as well as those of good governance are transparency, accountability, responsiveness, engagement, deliberation, inclusiveness, accessibility, participation, trust in democracy, democratic institutions and democratic processes, and social cohesion. Trust is indispensable for any type of e-democracy, at all stages and phases. It is closely related to accessibility, transparency and responsiveness.
- E-democracy gives an opportunity to enable and facilitate the provision of information and deliberation, enhancing in that way the civic participation in order to broaden political debate, and foster better and more legitimate political decisions.
- E-democracy concerns many different stakeholders and requires their co-operation. Member states, public authorities and their representatives, citizens, civil society and its institutions, politicians and political institutions, the media and the business community are equally e-democracy stakeholders that are all involved in the implementation and the development of e-democracy. It should be underlined that the implementation of e-democracy is not confined to the public authorities.
- E-democracy is not linked to and does not lead to a specific type of democracy as it can be implemented in different types of democracy and at different stages in the development of democracy.
- Using technology, e-democracy can attract young people to democracy, democratic institutions and democratic processes, contributing in that way to the decrease of the democratic deficit as it gives the opportunity to more and more people to participate in the democratic processes.
- If e-democracy is to be properly designed, it has to be based on the following concepts:

- **the active provision of comprehensive, balanced and objective information** designed to help the public understand problems, alternatives, opportunities and/or solutions to democratic issues; this concept is closely linked to freedom of information and freedom of speech;
- **a broad understanding of citizenship**, encompassing persons and groups of persons permanently residing and integrated in a political entity, irrespective of nationality;
- **citizen participation** – that is, the involvement of citizens and groups of citizens in public affairs, such as interest groups, corporations, associations and non-profit organisations (NPOs), so that they can exert influence and improve the quality and acceptability of the results of democratic processes;
- **empowerment** – namely, policies and measures to support citizens' rights and provide resources for participation;
- **inclusion** – that is, the political and technological empowerment of citizens irrespective of age, gender, education, socio-economic situation, language, special needs and place of residence. Such inclusion requires an ability to use electronic tools (knowledge, e-skills, e-readiness), available and accessible e-tools and a combination of electronic and non-electronic approaches;
- **deliberation** – namely, rational debate among equals, where people publicly discuss, endorse and criticise one another's points of view in a thoughtful, respectful discussion of an issue and action to be taken on it.

▸ E-democracy can result in a form of democracy which can be seen and observed, accessed and interacted with from anywhere, by all stakeholders enhancing the transparency of the decision making processes.

▸ E-democracy can bring together policy makers and citizens in new forms of engagement and policymaking. This can lead, on the one hand, to a better understanding of public opinion and people's needs by policy makers and, on the other, to a better public understanding of the tasks and challenges facing policy makers, and thus to increased citizen identification with the democratic system and a higher regard for, and greater trust in, democracy.

▸ E-democracy creates new channels for information, communication, deliberation and participation and enhances transparency and accountability, for that reason it has the potential to address shortcomings in democratic institutions and processes.

- E-democracy can foster social integration and social cohesion and thus contribute to social stability by providing a means of reducing exclusion as anyone regardless of its age, gender, educational level can participate in the democratic processes.
- E-democracy can enhance the increasingly European, international and global nature of politics and facilitate the cross-border collaboration this entails.

1.6 Barriers of e-democracy

The development and the success of e-democracy is not without obstacles and barriers. There are a number of areas where e-democracy should focus on and overcome[71] :

1.6.1 Barriers to participation

1. The creation of the so called *pseudoparticipation*[72]. In many countries till now the e-democracy projects have been developed mainly as pilot projects and not as sustainable strategies that last permanently. Citizens are unwilling to participate when they consider that their participation is meaningless and does not contribute to the political process or when it is believed that it is not given to their participation the appropriate attention.

2. It is the existence of the "digital divide" between those who and those who are not connected to the internet, between people who do not have equal opportunities to their access to ICT due to their age, culture, habits. There is the risk of creating "divide exclusion" raising barriers to the digitally excluded groups such as older people and people on low income, failing in that way to express the diversity of society. Instead of including larger groups or even all society, e-democracy can lead to the creation or petrification of special interest groups, to lobbying, and to a skewed

[71]Council of Europe, (2008), *E-democracy: who dares?*, The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008
[72]Ibid:p.4

idea of public interest[73]. For that reason the European Union has adopted policies in order to minimize the digital divide and make ICTs familiar to the citizens and part of their everyday life.

1.6.2 Institutional barriers

There may be such an increase in demand for e-democracy such as e-participation, e-voting that the administrations can not cope with it, meaning that there is lack of the appropriate political backing, lack of resources and organizational constraints for the application of e-democracy. The excess of information as in the information society with its new technologies there is sometimes too much information. According to the Council of Europe this raises the question about the so-called "bottleneck of attention"[74] meaning how to win the battle for people's attention with an overload of available information and websites, and how to win "the rules of credibility", whereby people decide what information to trust.

1.6.3 Legal Barriers

The legislation of each country may create legal barriers for e-democracy as e-democracy requires rules and regulations that need to have in the centre the citizen and be carefully balanced[75]. E-democracy opens up the citizen's participation thus it should focus on citizens' needs and limit the power of public authorities.

Additionally, it should avoid over-regulation and simplifies the e-democracy process protecting above all the citizens' rights, their privacy and personal data as well as their intellectual property. The key factors of regulation should be who participates, how and for what purpose, and which institutions are best placed to

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[73]Stahl, B. C. (2005) "The Paradigm of E-Commerce in E-Government and E-Democracy" in *Electronic Government Strategies and Implementation*, Wayne Huang, Keng Siau & Kwok Kee Wei (Eds), Idea Group Publishing, Hershey PA, page 5

[74]Council of Europe, (2008), *E-democracy: who dares?*, The2008 Session of the Council of Europe Forum for the Future of Democracy, Madrid (Spain) 15-17 October 2008

[75]Council of Europe (2009), Directorate General of Democracy and Political Affairs, Directorate of Democratic Institutions, Project: "Good governance in the information society", Indicative Guide No. 5 Recommendation of Committee of Ministers to member states on e-democracy.

ensure participation in, and the transparency of, decision making and to evaluate the process of e-democracy.

1.7 Benefits of e-democracy

The issue of e-democracy has been a subject of many researchers in the last decade, and of the Council of Europe as well in an attempt to make the state members of the European Union to adopt e-democracy policies. The adoption of these policies has got certain benefits on the citizens, the political parties and the governments.

1.7.1 Citizens' benefits of the e-democracy's implementation

As regards the citizens, the benefits of the e-democracy are the following[76]:

- It offers a world of opportunities to citizens to express their views and make their own opinions as well as the ideas of the groups to which they belong, known to public, enhancing the bottom-up interaction, making communication more horizontal and plural and having a first-person voice in the political agenda
- It gives the opportunity to the citizens to exercise some control over public affairs as citizens have the potential for having access to information about what political representatives are doing.
- The message travels outside the mainstream media (TV, radio), crossing different media, developing the participation of citizens on the issues discussed
- It enhances the tendency towards deliberative democracy in which citizens express in public their opinions as it raises the discussion on local politics that often often are forgotten from «big» politics and all topics can now be discussed.
- It minimizes the censorship on the information, making the information independent by policies

[76]Peña-López, I. (2010). "Goverati: e-Aristocrats or the delusion of e-Democracy". In Parycek, P. & Prosser, A. (Eds.), *EDem2010. Proceedings of the 4th International Conference on E-Democracy*, 23-39. Keynote speech. Wien: Österreichische Computer Gesellschaft. Retrieved February 06, 2011 from http://ictlogy.net/articles/20100506_ismael_pena-lopez_-_goverati_e-aristocrats_delusion_e-democracy.pdf

- It enhances the immediacy of events as things are communicated as they happen with short response times and no delays, offering more day-to day coverage of politics than any other news outlet.
- It makes individuals and political parties able to take part in the decision-making process

1.7.2 Political parties' benefits of the e-democracy's implementation

The political parties can also be benefited by the implementation of e-democracy as[77]:

- the politician has got a new role within the party and between the party and the citizen as the direct interaction creates new channels of governance,
- cyberpolitics change the way that information and communication takes place offering new potentialities to the political parties
- the e-democracy contributes to the decrease of the democratic deficit, increasing the participation of mainly young people to the political process

1.7.3 Governments' benefits of the e-democracy's implementation

There are important benefits for governments as well. Specifically[78]:

- the authorities have the opportunity to form their policy based on the reactions and the suggestions of individuals and informal groups making social control more issues with the application of the model of open government with open data and open communication channels. This should support a more disciplined process with clearer differentiation of aims and means and clear articulation of the which particular policy proposals are supposed to contribute to which objective and how.

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[77]Peña-López, I. (2010). "Goverati: e-Aristocrats or the delusion of e-Democracy". In Parycek, P. & Prosser, A. (Eds.), *EDem2010. Proceedings of the 4th International Conference on E-Democracy*, 23-39. Keynote speech. Wien: Österreichische Computer Gesellschaft. Retrieved February 06, 2011 from http://ictlogy.net/articles/20100506_ismael_pena-lopez_-_goverati_e-aristocrats_delusion_e-democracy.pdf

[78]Ibid:p.6

1.8 Quality of e-democracy

According to the European Council , the main question based on which the quality of e-democracy can be defined is the following:

To what extent do digital technologies contribute to the realization of democratic objectives that both government and citizens are trying to achieve?[79]

At this point, it should be clarified that the quality of democracy is based on the following measurement framework[80]:

- The institutional order of a social system is based on ideas of freedom and equality (e.g. freedom of speech, freedom of assembly, human rights)
- Inclusive citizenship is the leading idea (equal rights to vote, voting systems including minorities)
- Contestation and alternation within an-at least-two party system is self-evident
- Transparency of the decision making processes or "enlightened understanding"
- The existence of a well established and active public sphere.

The methods of evaluating the quality of e-democracy are based on qualitative and quantitative methods[81]:

As regards *the qualitative methods,* these include: Semi-structured interviews, field tests of e-democracy tools (incl. usability tests),on-line questionnaire, discourse analysis, analysis of talk policies, internal (government agency),documentation, measuring interactivity, analysing log files. *The quantitative measures* of on-line engagement refer to the use of e-democracy tools in terms of numbers of: registered users-usage statistics, responses to questionnaires, messages posted to discussion for, petitions raised, names added to petition. Another way of evaluating e-democracy is benchmarking between the use of sectors of e-democracy in different countries for example the use of e-participation according to *the e-participation index* and *the citizen participation measure*. Generally, the tool quality criteria for the ICTS that are

[79]Council of Europe, (2009), Directorate General of Democracy and political affairs, Directorate of Democratic Institutions, Project: «Good governance in the information society», Indicative Guide No.5 Recommendation of Committee of Ministers to member states on e-democracy, Evaluating e-democracy.
[80]Ibid:p. 4
[81]Ibid:p. 6

appropriate for assessing online tools[82] can be distinguished according to their *social acceptability, usefulness, usability* (table 8).

Criteria	Description
Social acceptability	
Trust and security	Is the information presented accurate, complete and reliable, and is the information users have provided handled in a secure manner?
Relevance and legitimacy	Are the intended users satisfied that the tool meets a purpose relevant to their own and their community's needs, and are the content and surrounding processes relevant to that purpose?
Usefulness	
Accessibility	Is the level of compliance with Web Accessibility Initiative (WAI) content guidelines sufficient to meet the needs of users with disabilities?
Appeal	Is the take-up in line with expectations, and do the intended users like it enoughto want to use it?
Content clarity	Can users understand what the content means in relation to their task or situation?
Responsiveness	Does the tool and/or process answer the user's questions quickly and effectively?
Usability	
Navigation and organisation	Do the intended users have sufficient and consistent information about their current position within the site organisation, the path they have taken, and the options available to them?
Efficiency and flexibility	Can the intended users perform tasks in an acceptable time, and are there appropriate short-cuts for doing repetitive or familiar tasks?

Table 8:E-democracy tool quality criteria （Ann Macintosh and Angus Whyte,2006)

[82]Macintosh A. (2008), e-Democracy and e-participation research in Europe, in *Digital Government: E-Government Research, Case Studies, and Implementation*, Vol. 17, Unit I, 85-102.

1.9 The quality framework to evaluate e-democracy

The quality framework to evaluate e-democracy is structured on the basis of a business process i.e. the collection of related and structured activities undertaken by one or more organizations in order to pursue some particular goals[83]. The execution of a BP involves humans, software applications, documents, methods and techniques to design, enact, control and analyze operational activities[84], while there is sometimes interrelation among the Business Processes as executing a BP often results in activating related BPs within the same or other organizations[85]. The BP plays a crucial role in the success of a business activity and for that reason in the recent years the Business Process Management (BPM) has been developed to denote that the entire management of an organization - strategy, goal setting, controlling and planning – should be based on its core processes[86].

Quality plays a crucial role for the BPM and it is remarkable that quality models have reinforced the implementation of BPM such as Total Quality Management[87].The BP of the quality evaluation of e-democracy refers to all the activities and methods that should be taken in order to implement the e-democracy project, involving all the stakeholders of e-democracy i.e. e-citizens, government, civil society, media. In our paper, it is made an attempt to identify specific quality requirements for e-democracy combining the "C2ST": a four dimensional quality framework for the delivery of e-services[88] with the models of e-democracy. The

[83] Corradini F., Hinkelmann K., Polini A., Polzonetti A., and Re B. (2009), C2ST: A quality framework to evaluate e-government service delivery, *Proceedings of the 8th International Conference EGOV*, Linz, Austria, 74-84.
[84]Ibid pp.3-6
[85]Lindsay A., Downs D., and Lunn K. (2003), Business processes – attempts to find a definition *Information and Software Technology*, 45(15), 1015-1019.
[86] Bandara, Wasana and Indulska, Marta and Chong, Sandy and Sadiq, Shazia (2007)
Major Issues in Business Process Management: An Expert Perspective. *Proceedings of the 15th European Conference on Information Systems*, St Gallen, Switzerland, 1240-1251.
[87]Ibid
[88] Corradini F., Hinkelmann K., Polini A., Polzonetti A., and Re B. (2009), C2ST: A quality framework to evaluate e-government service delivery, *Proceedings of the 8th International Conference EGOV*, Linz, Austria, 74-84.

"C2ST: dimensional framework refers to the assessment of e-services delivery according to the four quality dimensions while it should be clarified that the implementation of each quality dimension requires different business process levels-: Particular the framework for the e-services considers the following dimensions[89]:

Co-ordination

The term co-ordination means the capability of two or more public administrations to work together with the aim of accomplishing common goals using ICT through the delivery of a Government Digital Service to a citizen and using ICT. It is clear that in the e-government coordination, people and information system play a significant role for the implementation of a specific service.

Control

The quality dimension of control includes the proactive control i.e: in the provision of the e-service the administration may work as a proactive participant as the e-service may be available through direct communications to interested citizens providing precise references. Generally it refers to the policies that should be activated with the aim of achieving the service delivery from its start to its final fulfillment.

Sharing

Sharing refers to the way in which the public authorities handles and shares citizen data with other administrations in order to participate in the delivery of a specific service as it is widely acceptable that citizens generally feel uncomfortable when they use a service that asks for authorization to store citizen data.

Transparency

Transparency is the ability of the administration to make citizens aware of the delivery process so to improve citizens perceived trust and inclusion as the citizens feel more satisfied by the provided services when they have got a clear and reliable view on how the service is executed.

Based on the above "C2ST" four dimensional quality framework for the delivery of e-services, it has been made an attempt to structure the quality framework for the

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[89]Corradini F., Hinkelmann K., Polini A., Polzonetti A., and Re B. (2009), C2ST: A quality framework to evaluate e-government service delivery, *Proceedings of the 8th International Conference EGOV*, Linz, Austria, 74-84.

evaluation of e- democracy i.e. the "C2ST" a four dimensional quality framework for the delivery of e-services adjusted to the e-democracy models.

The quality framework for e-democracy consists of four quality dimensions that are the following:

Co-ordination

In the quality evaluation of e-democracy co-ordination refers to which degree the co-operation with each other of public authorities using ICTs affects the implementation of e-democracy and to which degree the co-ordination of the public authorities' staff influence the implementation of e-democracy. The harmonious cooperation of all the stakeholders involved in the implementation of e-democracy is a prerequisite for the function of e-democracy in the different stages and the different sectors (e-participation, e-consultation e.t.c.) that is implemented.

Control

The quality control in e-democracy refers to the specific original, complete information given for e-democracy by the authorities for the implementation of e-democracy with the aim of enhancing the control of the politicians. Governments as a public institutions and guardians of democracy, should play a proactive role in the online world. Firstly, it is necessary to maintain existing democratic practices in spite of pressures coming from the information-age. Secondly, they should adapt and incorporate online strategies and technologies with the aim of leading efforts that expand and enhance participatory democracy. The more and more deepening citizen participation in democracy is crucial for affirming that governments at all levels and in all countries can both adjust to the will of their people and more effectively meet public challenges in the information-age[90].

Sharing

In the e-democracy framework, sharing refers to the way in which the public authorities handles and shares citizen data with other administrations in order to implement e-democracy. The protection of personal data is a key –principle for e-democracy since the citizens need to be aware that their personal data are used only

[90]Steven Clift, E-Democracy, E-Governance and Public Net-Work, on –line at: http:// www.opensourcejahrbuch.de/Archiv/2006/abstracts/kapitel_04/abstracts/2004/pdfs/IV (accessed on February, 2011) .

for the purpose they were given. The e-democracy process should protect above all the citizens' rights, their privacy and personal data as well as their intellectual property and the public authorities should take all the necessary legal measures in that direction. Otherwise the citizens' trust on e-democracy may be lost and as a consequence the whole project of e-democracy will be jeopardised.

Transparency

In e-democracy, the dimension of transparency refers to the obligation of the institutions to operate with openness and to make citizens fully aware of the decision making-process aiming at facilitating their participation. Transparency improves citizen's trust on the political system as it "constitutes a layman's basic map of the organization as depicted in the information on the site and reveals the depth of access it allows, the depths of knowledge about processes it is willing to reveal, and the level of attention to citizen"[91].

The proposed quality framework is a tool that allows us to formally verify, if the e-democracy implementation satisfies one by one the quality requirements defined in the quality framework.

[91] Welch E.W., and Hinnant C.C. (2003), Internet use, transparency, and interactivity effects on trust in government, *Proceedings of the 36th Hawaii International Conference on System Sciences*, IEEE Computer Society, Washington DC, USA, 1-7.

CHAPTER 2

Methodology

The promotion of knowledge, its validity and its authenticity is the purpose of a scientific research. The confirmation of the knowledge produced is due mainly to the use of the scientific method and specifically due to the systematic and structured procedures and technical analyses which confirm the conclusions of the research.

The research tools

The methodology of our research is based on the use of qualitative and quantitative tools. Specifically, it is a primary research and for the conclusions drawn is used the quantitative method of the structured questionnaire.

The elaboration of the answered questionnaires includes the creation of electronic files with the aim of collecting, classifying and analysing the data by using the Excel Programme while the confirmatory factor analysis was also applied to investigate whether the four aforementioned dimensions of e-democracy are indeed the core dimensions of this construct. The dimensions of e-democracy were analyzed to specific quality criteria as follows (the corresponding variables are given in parentheses):

***Coordination*:**

- E-democracy presupposes the design and development of an integrated information system in every public agency (v37).
- Integrating the information systems of all public agencies is a necessary condition for the fulfilment of e-democracy (v38).
- The personnel of a public agency responds much better when the citizens' requests concerning issues of authority exercise are electronically submitted (v39).
- The coordination of the acts of the personnel of all public agencies is a necessary condition for the fulfilment of e-democracy (v40).

***Control*:**

- E-democracy reinforces the control of central government by citizens (v41).
- Citizens are able, through the Internet, to express their opinions and control the activities of politicians (v42).

- E-polling results constitute a tool of developing and controlling the governmental policies (v43)
- E-consultation, e-legislation, and e-petitioning assist citizens to control the Parliament's functioning (v44).

***Sharing*:**

- The personal data of citizens are protected in an e-democracy system (v45).
- Citizen's data transfer from one public agency to another public agency explicitly assumes citizen's authorization (v46).
- The accomplishment of political campaigns through the Internet contributes to sensitization and mobilization of citizens regarding political issues (v47).
- Citizen's awareness regarding e-legislation makes easier the implementation of the law (v48).

***Transparency*:**

- E-voting results are reliable and valid (v49).
- Citizens get fully informed, through the Internet, about governmental authority issues (v50).
- E-democracy enhances citizen's trust to the democratic rules (v51).
- E-participation makes the political decisions more transparent (v52).

The sixteen quality criteria, formulated in the way mentioned above, were rated by means of a survey conducted among citizens in the broader area of Thessaloniki, Greece. Since the survey is still in progress, the sample size used in this work was 208 citizens without any constraints concerning the gender and their occupation. The only constraints pertained their age (over than 18 years old) and education (at least secondary education graduates). The sample size was acceptable for factor analysis, since the minimum size required is five times the number of variables, i.e., 80 individuals. The data were collected through personal interviews and electronic mail messages using a structured questionnaire, which is divided into three main sections familiarization with e-democracy sectors, assessment of benefits and obstacles of e-democracy, and, rating of e-democracy quality criteria (Index 1). For the purpose of rating the quality criteria, a five-point Likert scale was used (i.e., strongly agree, agree, neither agree nor disagree, disagree, strongly disagree).

We selected Principal Component Analysis (PCA) as a factor extraction method. It should be mentioned that when the values of most of the communalities (estimates of variables' common variance) exceed the value 0.6 (as indicated in Table 8), then PCA and common factor analysis provide essentially identical results.

CHAPTER 3

SURVEY ANALYSIS

The investigation was carried out in a number of citizens engaged in civic activity and the questionnaire answered is structured in the following sections:

Section 1: a) Personal Data- b) Familiarization with the PCs and the Internet

Section 2: Familiarization with e-democracy sectors

Section 3: Assessment of benefits and obstacles of e-democracy

Section 4: Rating of e-democracy quality criteria

Each of the sections above is comprised by subcategories that are presented in detail in the analysis of each section that follows.

3. 1 Personal Data- Familiarization with the PCs and the Internet

3.1.1 Personal data

Though the questionnaire was anonymous, it included personal data, such as the gender, the age, the education and the occupation of those asked. Each of these data, combined with the answers given, can give important information as regards how the citizens understand the concept of e-democracy.

GENDER

GENDER	ABSOLUTE FREQUENCY N	RELATIVE FREQUENCY %
Men	**91**	**43,75**
Women	**117**	**56,25**
Total	**208**	**100%**

Table 9 : sample's gender

The majority of those answered the questionnaire, as it is shown in table 9, is women (117 out of 208, i.e. 56,25%) while there is no divergence compared to men (91 out of

208 i.e. 43,75%). In general, the gender is not a constraint to our survey as there is a satisfactory sample of both women and men who have answered the questionnaire.

AGE

The sample of those answered the questionnaire has been random and one presupposition required has been that they should be over 18 as in Greece only those who are adults have got the right to participate in the elections.

Among those who have answered the questionnaire, as it is depicted in table 10, 27 out of 208 (13%) are between 18-25 years old, while the majority 124 out of 208 (60%), lies between the age of 26-40 and 57 out of 208 (27%) belong to the last category: over 40 years old.

AGE	ABSOLUTE FREQUENCY N	RELATIVE FREQUENCY %
18-25	**27**	**13%**
26-40	**124**	**60%**
40 +	**57**	**27%**
Total	**208**	**100%**

Table10 : sample's age

EDUCATION

The education has been the other presupposition to our survey as those who have answered the questions should have at least been completed their studies in the secondary level of education in Greece (Lykeio).

In the table 11 the educational level of those answered the questionnaire is described. In particular, among those asked, 32 out of 208 (15%) have completed their studies in Lykeio, the most 112 out of 208 (54 %) have got a University Degree and a significant number 64 out of 208 (31%) have completed their Post graduated Studies.

EDUCATION	ABSOLUTE FREQUENCY N	RELATIVE FREQUENCY %
lykeio	**32**	**15%**
university	**112**	**54%**
Post graduated studies	**64**	**31%**
Total	**208**	**100%**

Table 11:sample's educational level

OCCUPATION

As regards the occupation, it has been categorized in the private and public sector, the professionals, the retired and the unemployed. The results are described in the table 12

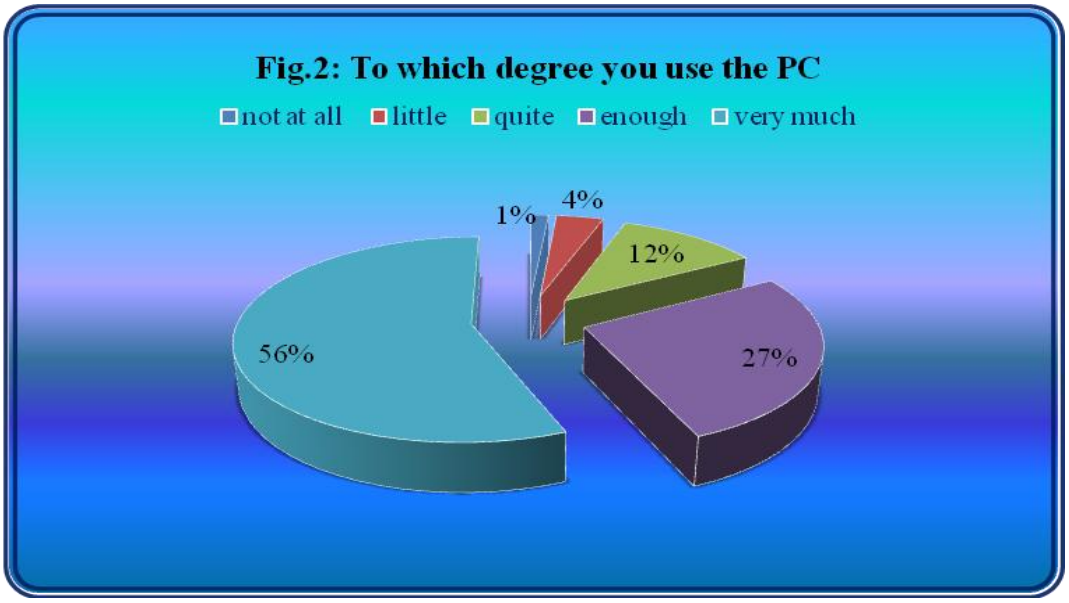
OCCUPATION	ABSOLUTE FREQUENCY N	RELATIVE FREQUENCY %
Private sector	**50**	**24%**
Public sector	**106**	**51%**
Professional	**19**	**9%**
Retired	**0**	**0**
Unemployed	**33**	**16%**
Total	**208**	**100%**

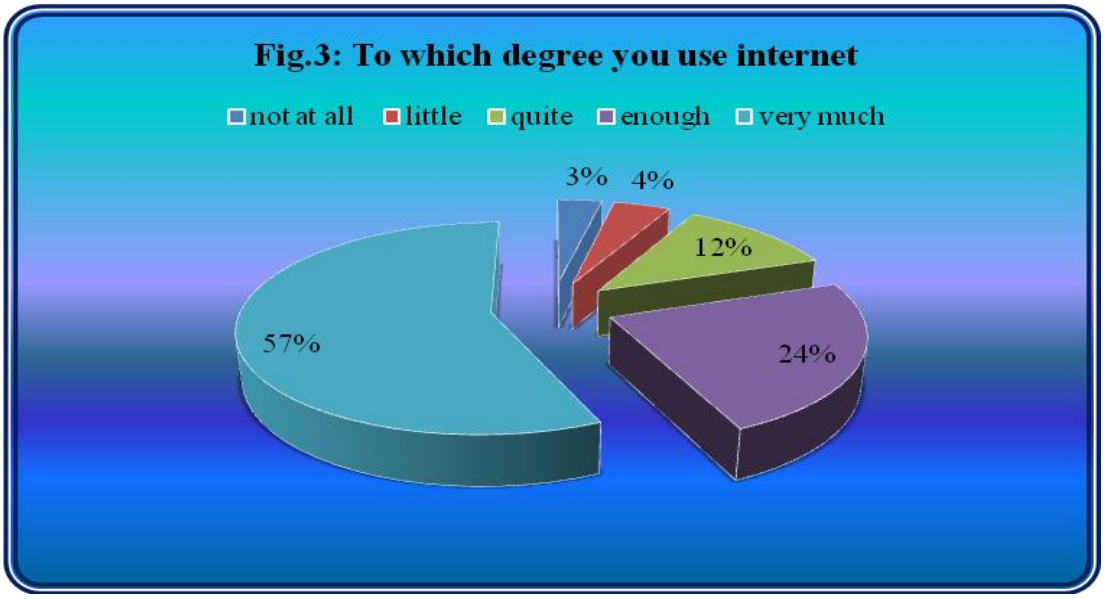
Table 12: sample's occupation

The majority 106 out of 208 (51%) are occupied in the public sector. The private sector follows as 50 out of 208 (24%) work in the private sector and 33 out of 208 (16%) are unemployed. Few of the sample are professionals 19 out of 208 (9%) while there is no representative sample of the retired.

3.1.2 Familiarization with the PC and the Internet

In this section, it is made an attempt to register the respondents' familiarization both with the PCs and the Internet. With the term familiarization we mean to which degree are used the PC and the Internet by the respondents and for rating the degree has been used the following Likert scale: 1. Not at all 2.little 3.quite 4.enough 5.very much. According to the figures 2 and 3 that depict the results of the questionnaires' analysis the majority of the respondents 56% and 57% use





respectively the PC and the Internet very much. 27% use the PC enough and 24% use the Internet as well enough. If we sum the percentage of those used the PC very much and enough, and the internet as well, it shows that the great majority of the respondents use the PC and the Internet as the percentage is 83% and 81% respectively. In contrary, only 1% of the respondents do not use the PC at all and the percentage for those who do not use the Internet at all reaches the 3%.

The above results show that the PCs and the Internet are widely used nowadays, con-firming in that way that the ICTs penetrate more and more in our everyday life and their impact on our way of living becomes stronger and stronger as the time passes .

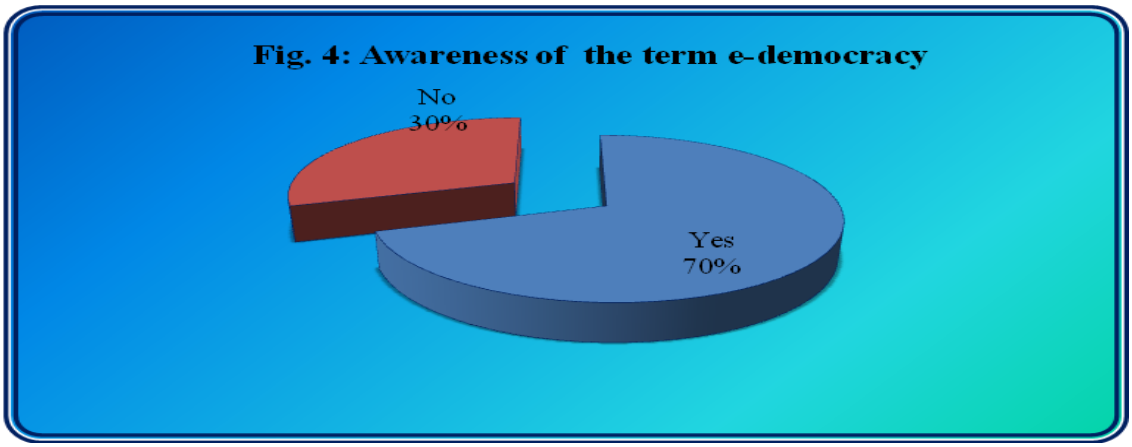
3.2 Familiarization with e-democracy sectors

The aim of this section of the questionnaire is to register if the respondents have ever been informed about e-democracy. The first question posed regarding this section, is if " they know the term e-democracy" and as the results show in the table 13 and the figure 4, the majority of the respondents are aware of the term e-democracy since 146 out of 208 (70%) have responded positively and 62 out of 208

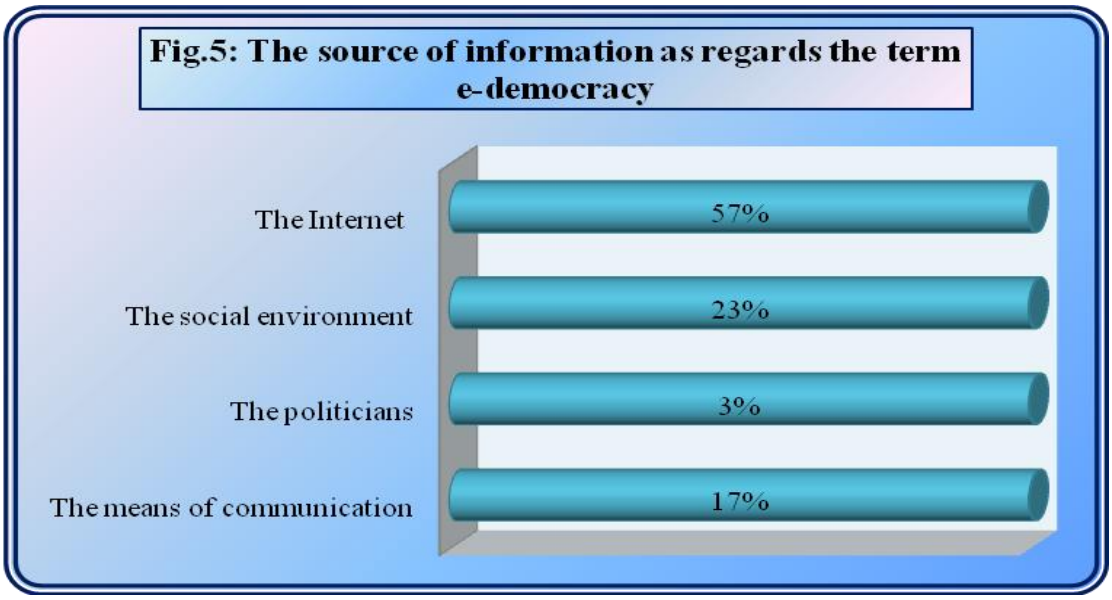
Do you know the term e-democracy?	ΑΠΟΛΥΤΗ ΣΥΧΝΟΤΗΤΑ N	ΣΧΕΤΙΚΗ ΣΥΧΝΟΤΗΤΑ %
Yes	146	70%
No	62	29 %

Table 13: Awareness of the term e-democracy

(30%) have responded negatively. It is relatively a satisfactory percentage if we take into consideration that in Greece the implementation of e-democracy is in the very beginning and few has been done in this direction. In connection with the results



in the figure 4 it is really interesting the results as depicted in the figure 5 and refer to the source of the information of those who have responded positively as regards the term of e-democracy.



According to the figure 5, the continuous growth of the Internet in the last years seems that has influenced the way that the citizens are informed since 57% of those that responded that are aware of the term e-democracy have been informed about e-democracy through the internet. The other means of communication i.e.: the television, the radio, have contributed to the awareness as 17% of the respondents have been informed by them, however it is noticeable that the means of communication are in the third rank. The social environment seems to play a

significant role as it has been the source of information for the 23% of the respondents. Last in the rank are the politicians as only 3% of the respondents have been informed as regards the e-democracy by them while it should be expected that the politicians would be protagonists in this part since the enhancement of e-democracy is closely related to the development of the quality of the political system and the politicians undoubtfully are part of the political system.

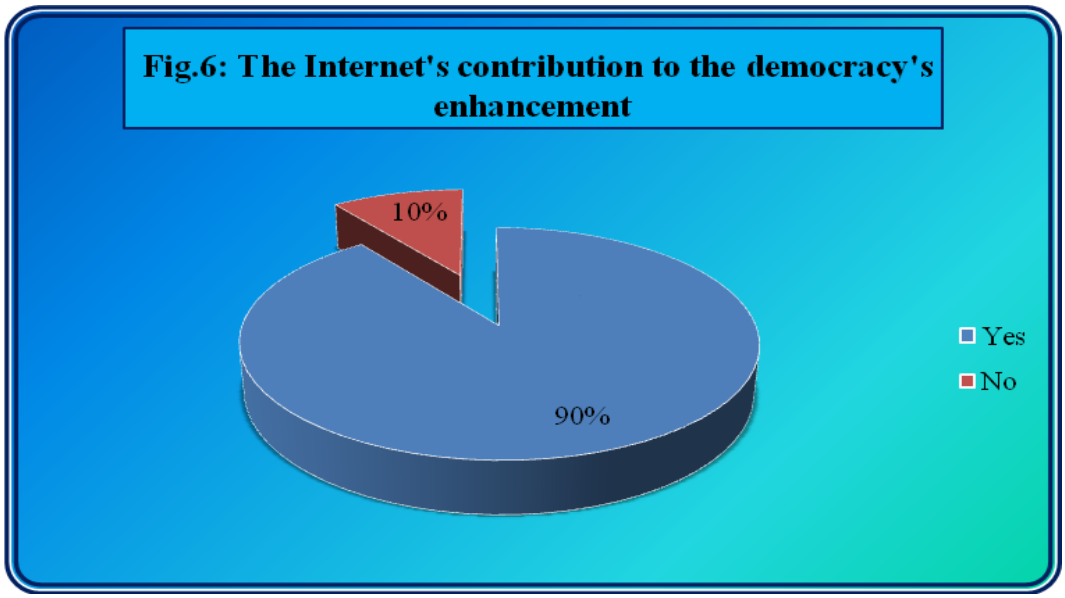
3.3 Assessment of benefits and obstacles of e-democracy

The implementation of e-democracy has got many benefits and obstacles as they have been presented in detail in the previous chapters. In this section we try to register the citizens' opinions about the benefits and the obstacles of the implementation of e-democracy in Greece with the aim of evaluating the results.

3.3.1 Assessment of benefits of e-democracy

For the assessment of the development of e-democracy in Greece, first of all, the respondents were asked if "they believe that the Internet contribute to the democracy's enhancement". The positive answer to that question was a prerequisite for the respondent to continue with the question that is related with the benefits of e-democracy. The percentage of those answered that the Internet contributes to the democracy's enhancement reaches the 90% (187 out of 208), while a percentage of 10% (21 out of 208) answered negatively.

Thus, according to the findings, as they are depicted in the figure 6, the citizens consider that the advantages of the Internet such as its directness, speed, interactivity offer new potentialities for the democratic institutions and the citizens' involvement in the political processes, compared to the other mass media communication. The more the involvement in the political processes the more the benefits for all the stakeholders i.e.: the citizens, the government and the institutions. The opinion of the respondents as regards to which degree are important the benefits of the implementation of e-democracy in Greece are presented in the diagrams below.



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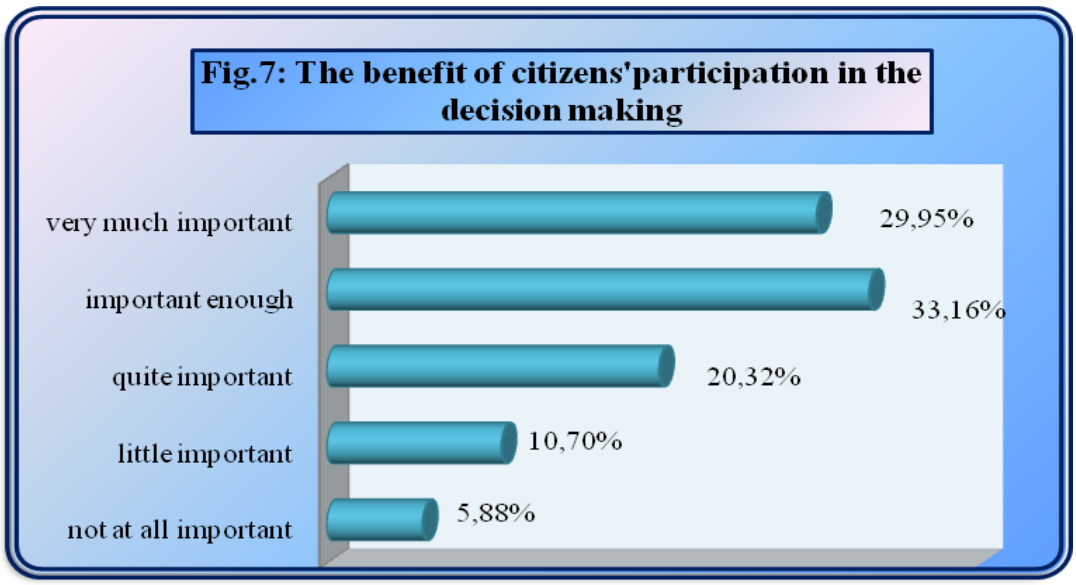
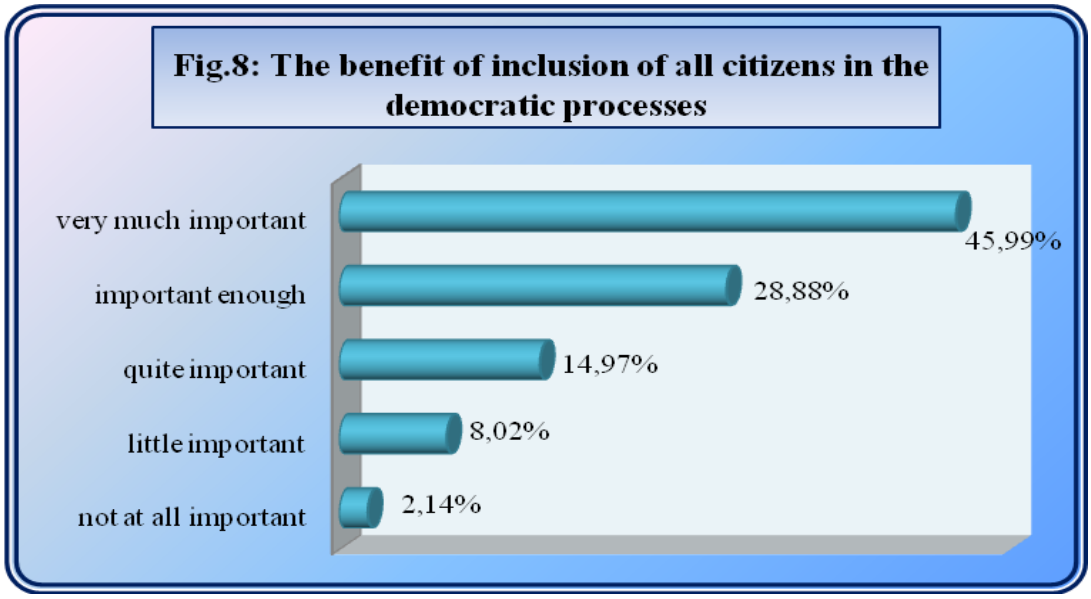
According to the diagram 7, 33,16 % of those answered that the Internet contributes to the democracy's enhancement consider that the participation of the citizens in the decision making process is a very much important benefit from the implementation of e-democracy in Greece. Citizens seems to seek the participation in



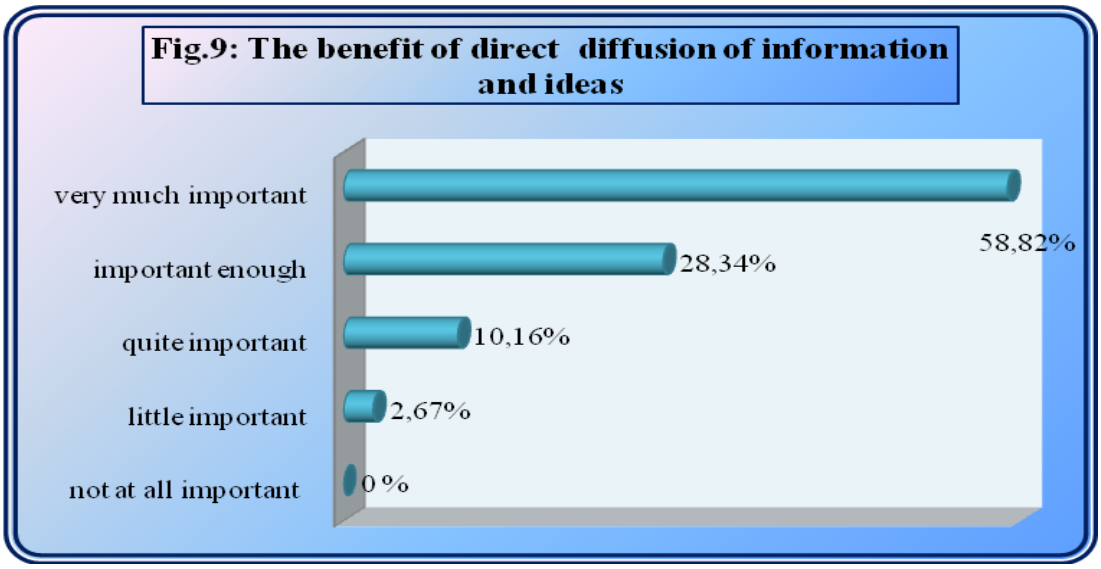
the processes if it is additionally taken into consideration that 29,95% of the respondents believe that the participation in the decision making process is an important enough benefit for Greece. Contrary, only 5,88% of the respondents

consider that the participation in the decision making process is “not at all important” benefit for Greece

The second benefit for which was asked the opinion of citizens as regards its degree of importance, is that all the citizens (for example the disabled) are able to participate in the processes due to the implementation of e-democracy in Greece. According to the figure 8, this benefit is considered very much important for the 45,99 % of those responded to the questionnaire as through the Internet the citizens have got access to the processes regardless their physical status, their occupation, their age, their nationality and a percentage of 28,88 % consider this benefit important enough as well. The inclusion of the citizens in the political process is considered of no importance at all for the 2,14% of the respondents while for the 8,02% of the respondents this particular benefit has got a little importance.

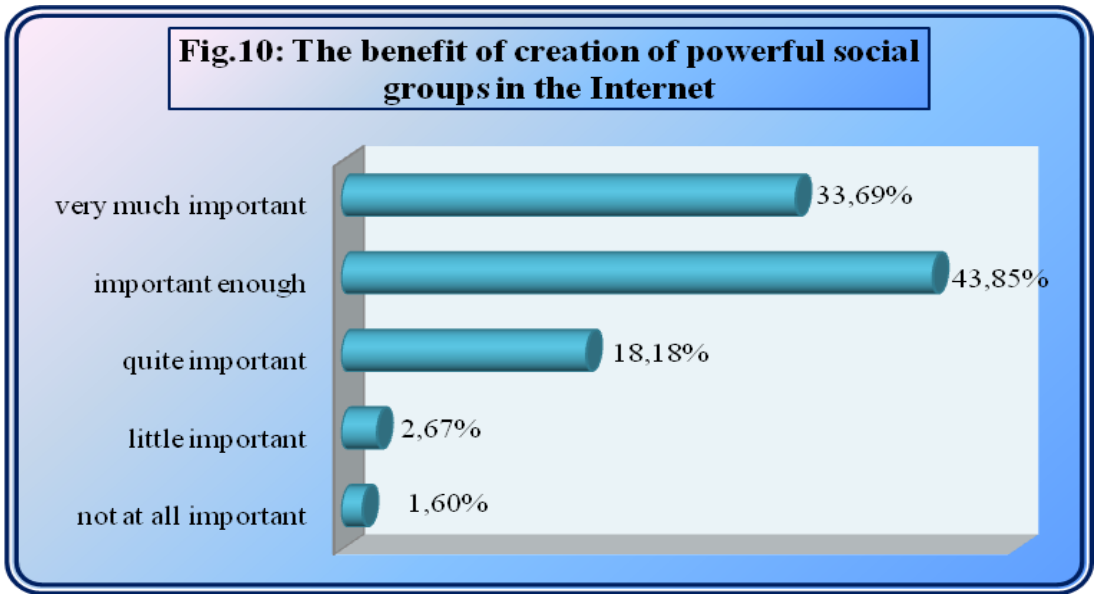


“ How much important do you consider the benefit of the direct diffusion of the ideas and the information due to the development of e-democracy in Greece ? ” .



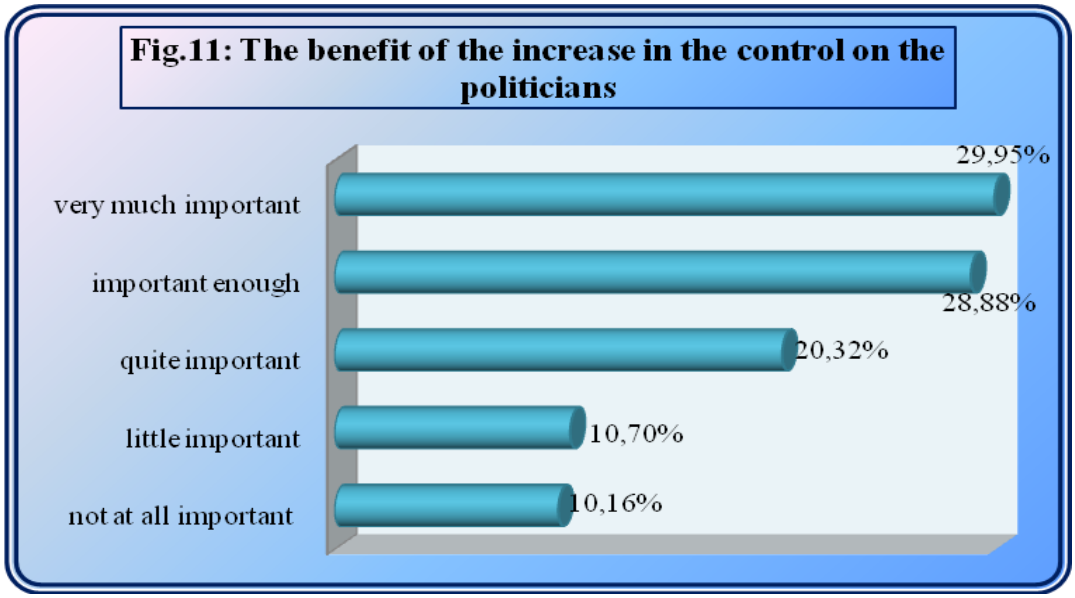
This is the next question as regards the benefits and the answers are presented in the figure 9. The direct diffusion of the information and the ideas through the web sites and the blogs is considered a very much important benefit for the 58,82% of those asked. There is no time and space limitation to the diffusion of the information through the Internet as it is an open space where the citizens may have got access to the information they need any time no matter where they are and citizens can interact with each other exchanging ideas and information on the specific topics they are interested in. It should be noticed that it is the only benefit that it presents a zero percent in the scale of «not at all important», compared to the other benefits, while the sum of those answered very much important and important enough reaches the 87,16% i.e.: the highest level of importance among all the benefits evaluated.

One other benefit of the development of e-democracy is the creation of powerful social network groups. But how much important is that for the citizens? According to the figure 10, it is important enough for the 43,85 % of the citizens asked and it quite important for the 18,18% while it is “not important at all” for the 1,60 %. The direct diffusion of the information and the ideas with the creation of powerful social groups are the two benefits that present the lowest percentage in the scale of “not important at all”. This shows that the citizens want the Internet to play a significant role in the enhancement of the interaction as a means of communication whose main characteristic is the existence of freedom in the exchange of information



and the creation of social groups that share the same ideas and are united by common characteristics and goals, enhancing in that way the democratic institutions.

The last benefit for which the evaluation of its importance was asked is the increase of the control on the politicians, by using the processes of e-democracy. It is the benefit that it presents the highest level in the scale of not important at all i.e.: the 10,16% of the respondents, and one of the higher percentage in the scale of little important i.e.:10,70% (fig. 11). It seems that the citizens believe the benefits of e-democracy should be greater than the increase of the control on the politicians.



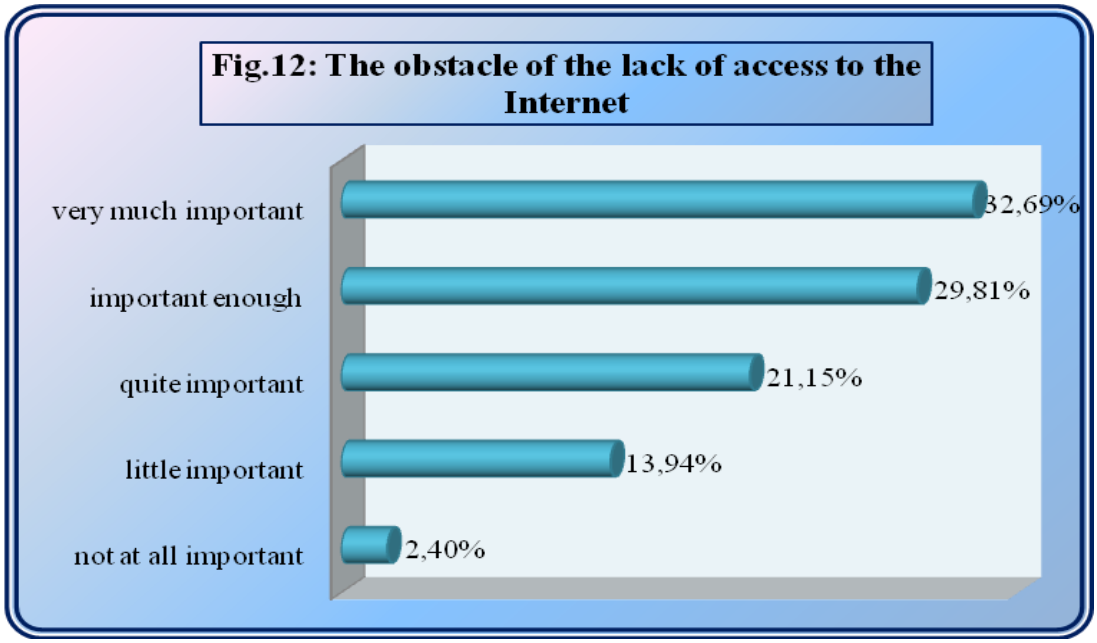
However, the opinions of the citizens are divided more or less the same among the scale of “very much important” and “important enough” as the percentage is

29,95% and 28,88% respectively that is the lowest percentage in this scale compared to the importance of the other benefits of the development of e-democracy in Greece.

3.3.2 Assessment of obstacles of e-democracy

For the assessment of the obstacles of the development of e-democracy in Greece, the respondents were asked to evaluate the importance of eight obstacles that are presented and analyzed in detail below.

The first obstacle is related with the citizens' lack of access to the internet and the results are depicted in the figure 12. The 32,69% of the citizens asked, consider this obstacle very much important that hinders the implementation of e-democracy in Greece. This may happens due to the lack of the appropriate



infrastructure of the government or the lack of citizens' information about the necessity of the access to the internet or the so called "digital divide". No matter what the reasons are for the lack of access of the citizens to the Internet, the 29,81% of the citizens consider this obstacle of "important enough" while only the 2,40% consider that the obstacle of the lack of access to the Internet does not influence at all the implementation of e-democracy in Greece.

Apparently, there are other more important obstacles than the obstacle of the lack of access to the Internet as the analysis of the questionnaires' results has shown. One of the most important obstacles as it is depicted in the figure 13 is the lack of informatiom about e-democracy. The 53,85% of citizens believe that the unawareness of the citizens about e-democracy is a "very much important" obstacle for the implementation of e-democracy while a great percentage 32,21% consider this obstacle as "an important enough". It is worth noticing that despite the degree of importance i.e.: very much important, important enough, quite important, almost all the citizens 96,64% estimate that the absence of information about e-democracy is

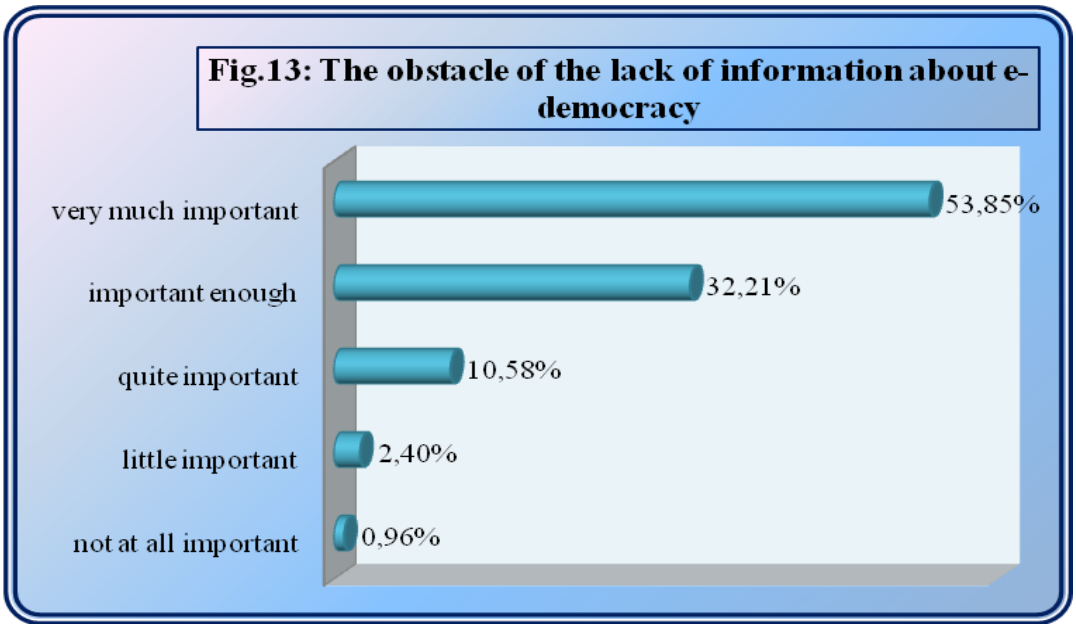
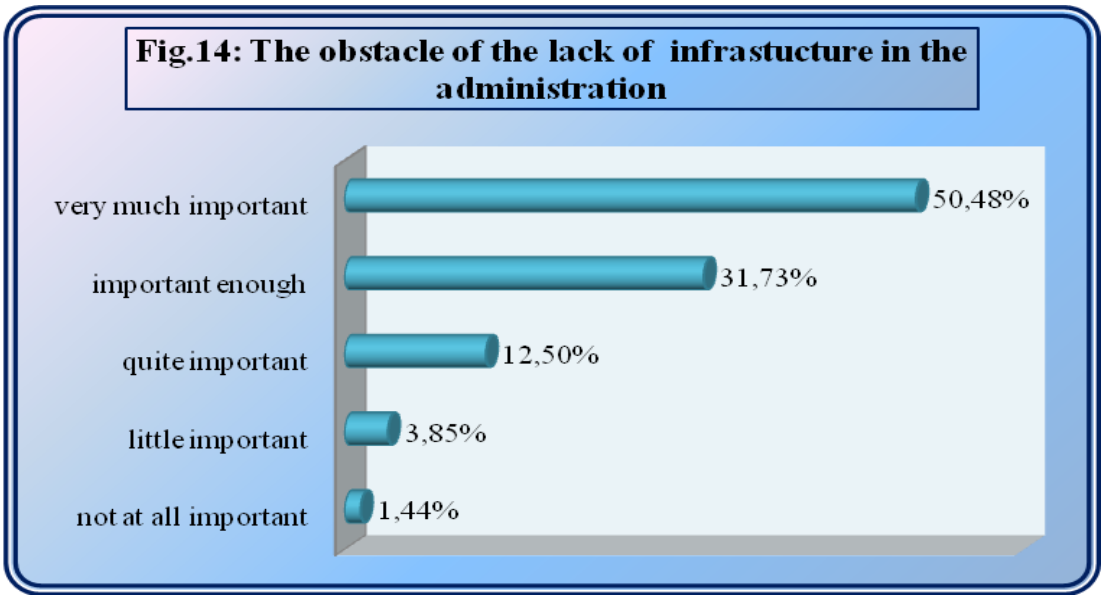


Fig.13: The obstacle of the lack of information about e-democracy

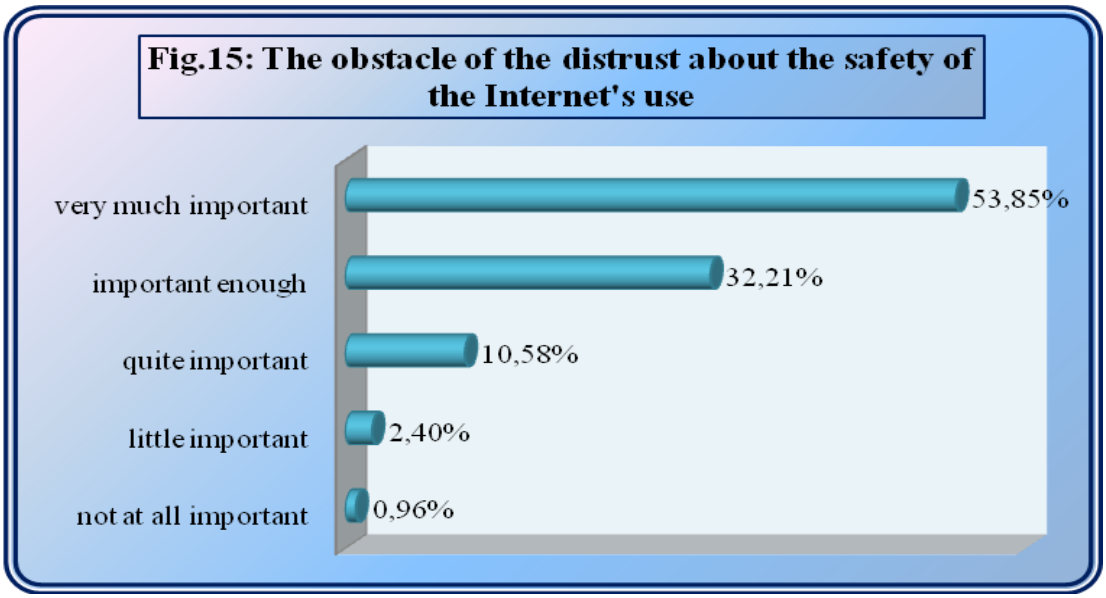
obstacle as it is difficult to implement a process if there is a lack of awareness about the concept and the function of this particular process.

The implementation of e-democracy, also, requires the support of the administration at all stages but mostly at the provision of the appropriate infrastructure. With the term infrastructure it is mainly meant the appropriate organizational systems i.e.: the available information-systems for the implementation of e-democracy. Over the half of the citizens consider the lack of infrastructure a very much important obstacle and the 31,73% of them believe that the lack of infrastructure is an important enough obstacle (fig 13). The political backing seems to influence a lot the implementation

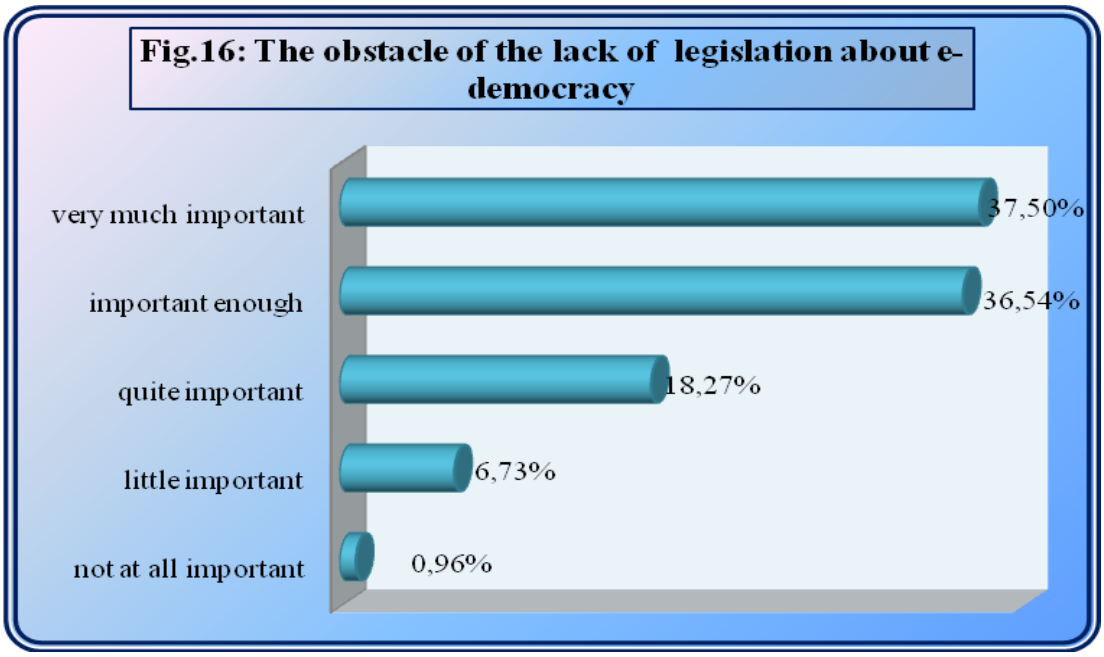


of e-democracy as the government is the main source of the most organizational barriers that create many obstacles for the implementation of e-democracy. It seems that the provision of the appropriate infrastructure may influence and diminish other obstacles as well, such as the awareness about the e-democracy, the distrust about the reliability about the information provided or the lack of the legislation for e-democracy.

Another obstacle for which the citizens have been asked to denote its importance for the implementation of e-democracy is the distrust about the safety of the Internet's use. It is an obstacle of high importance for the 53,85% of those answered the questionnaire while a percentage of 2,40 % and 0,96% consider this obstacle of little important and «not at all important» respectively (fig 15). The distrust about the safety of the Internet's use is an obstacle that it should be examined combined with the obstacle of the lack of legislation about e-democracy.

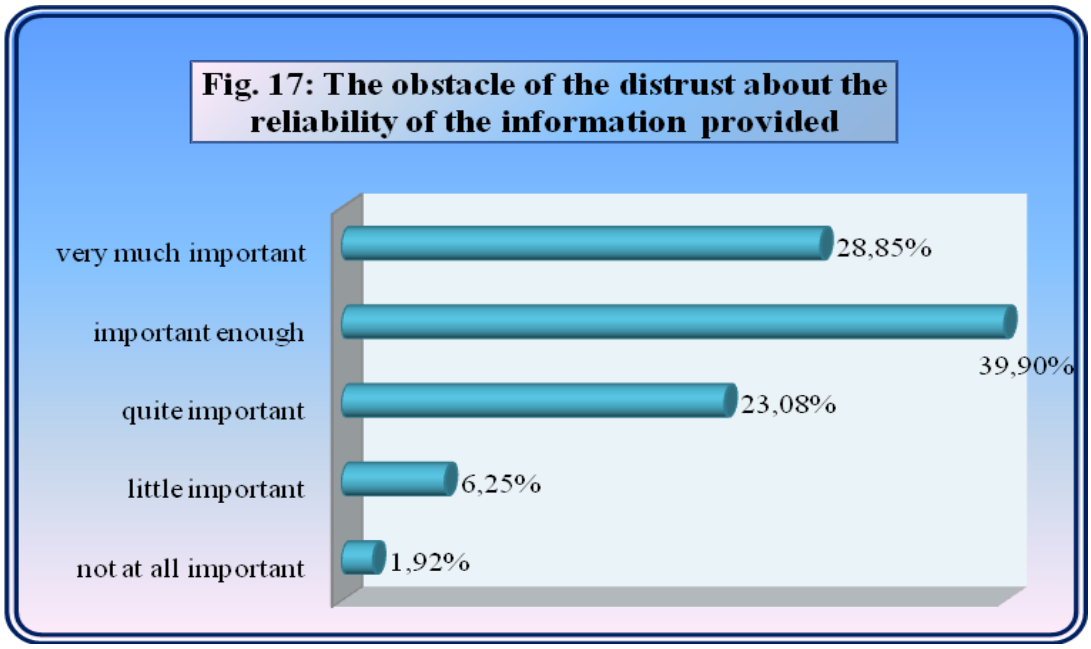


Judging by the figure 16, the lack of legislation about e-democracy seems to be an obstacle that it is valued by the 92,31% of the respondents from very much important to quite important obstacle. The lack of legislation hinders the participation of the citizens in the e-democratic processes as the citizens need to



know that their rights, their privacy and their personal data are protected while they are involved in the e-democracy process. Additionally, the existence of a legislative framework enhances the citizens' belief that their participation in the e-democracy

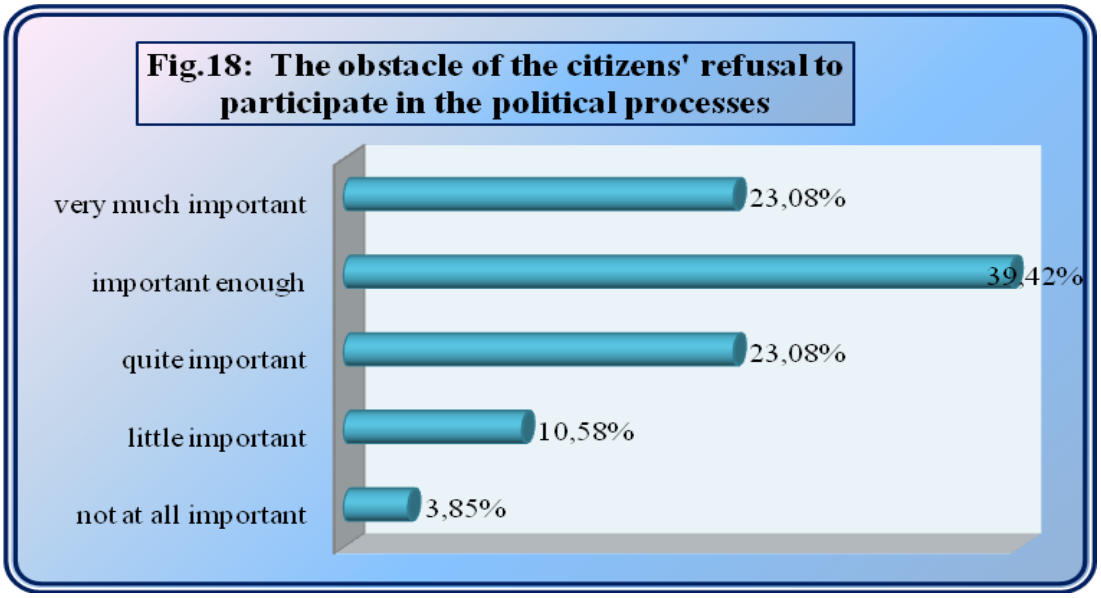
processes will be taken into consideration by the government and they will contribute to the political process.



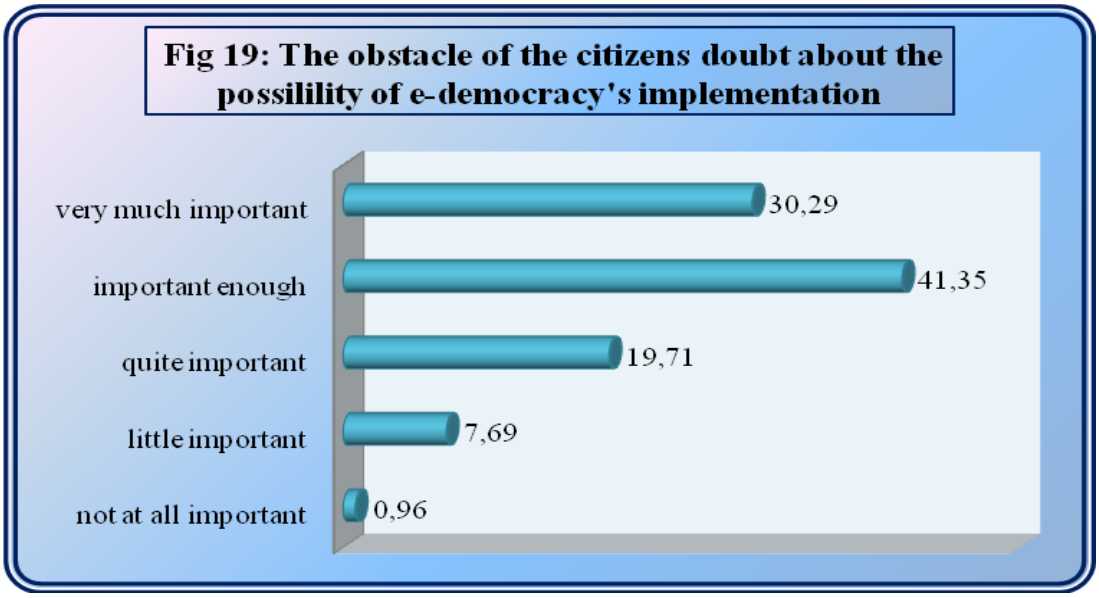
It is widely acceptable that the information provided by the Internet is unlimited as a great number of web pages are available at the citizen. The reliability of the information provided and the degree to which the citizens can trust it is an issue as regards the implementation of e-democracy. The 39,90 % of the respondents consider the distrust about the reliability of the information provided as an important enough obstacle for the implementation of e-democracy process. Judging by the figure 17, the reliability of the information provided seems to play a significant role in the implementation of e-democracy in Greece since the lack of reliability seems to be an obstacle for almost the 92% of the respondents as 28,85% of the respondents consider the distrust about the reliability of the information provided a "very much important" obstacle, the 39,90% consider it an "important enough" obstacle and the 23,08% believe that the above mentioned obstacle is "quite important".

The democratic deficit is widely discussed in nowadays as more and more citizens refuse to participate in the political processes. Does the democratic deficit influence the participation in the e-democracy process? According to the figure 18, the 39,42% of the respondents estimate that the citizens' refusal to participate in the

political process is an important enough obstacle for the implementation of e-democracy. However, this obstacle is considered of little importance for the 10,58%



of the citizens and of no importance at all for the 3,85%. It should be pointed out that the citizens' refusal to participate in the political process is the only obstacle of all mentioned in this chapter that presents the highest percentage in the scale of little importance and in the scale of not at all importance meaning that this is not an obstacle that influence the implementation of e-democracy in Greece.



The last but not least obstacle mentioned in this paper is the citizens' doubt about the possibility of e-democracy's implementation. The results that are depicted in the figure show that the majority of the respondents - 41,35% of them- seem to consider this obstacle of enough importance, the 30,29% of those asked consider it of very much importance while the 19,71% believe that it is quite important. It seems that the citizens doubt the e-democracy can be implemented in Greece and this belief influences their participation in e-democracy as they are unwilling to participate in a process that it will not be taken into consideration by the political authorities.

3.4 Rating of e-democracy quality criteria

In this section it is registered the respondents' opinion about the sixteen e-democracy quality criteria as they are categorized under the four dimensions of e-democracy: co-ordination, control, sharing and transparency.

Co-ordination

The four quality criteria of this dimension are the following:

- E-democracy presupposes the design and development of an integrated information system in every public agency.
- Integrating the information systems of all public agencies is a necessary condition for the fulfilment of e-democracy.
- The personnel of a public agency responds much better when the citizens' requests concerning issues of authority exercise are electronically submitted.
- The coordination of the acts of the personnel of all public agencies is a necessary condition for the fulfilment of e-democracy.

According to the table …the majority of the respondents agree that the above mentioned quality criteria are the main quality criteria that consist the dimension of co-ordination. In particular, the 48,08% of the respondents agree that the "E-democracy presupposes the design and development of an integrated information system in every public agency" and "Integrating the information systems of all public agencies is a necessary condition for the fulfilment of e-democracy". The 46,63% of the respondents neither agree nor disagree that "the personnel of a public agency responds much better when the citizens' requests concerning issues of authority

exercise are electronically submitted" while as regards the quality criteria of "The coordination of the acts of the personnel of all public agencies is a necessary condition for the fulfilment of e-democracy" agree with the before mentioned criteria.

Control

The respondents are asked about the following four quality criteria of this dimension:

- E-democracy reinforces the control of central government by citizens.
- Citizens are able, through the Internet, to express their opinions and control the activities of politicians.
- E-polling results constitute a tool of developing and controlling the governmental policies.
- E-consultation, e-legislation, and e-petitioning assist citizens to control the Parliament's functioning.

The results of the questionnaires' analysis are shown in the table 14 and show that the greatest percentage of the respondents agree that the above mentioned quality criteria consist the quality dimension of control.

Sharing

Sharing is the third quality dimension and the main quality criteria are the following:

- The personal data of citizens are protected in an e-democracy system.
- Citizen's data transfer from one public agency to another public agency explicitly assumes citizen's authorization.
- The accomplishment of political campaigns through the Internet contributes to sensitization and mobilization of citizens regarding political issues.
- Citizen's awareness regarding e-legislation makes easier the implementation of the law.

In the table 14, the 48,56% of the respondents strongly agree that the "citizen's data transfer from one public agency to another public agency explicitly assumes citizen's authorization" confirming that the citizens deeply concern about the protection of their personal data and they are skeptical about the protection of their personal data in an e-democracy system as the 41,35% neither agree nor disagree with this quality criteria. In contrast, the 40,38% and the 47,12% respectively agree with the two last

THE SIXTEEN QUALITY CRITERIA	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
Coordination					
E-democracy presupposes the design and development of an integrated information system in every public agency	40,38%	48,08%	8,65%	2,40%	0,48%
Integrating the information systems of all public agencies is a necessary condition for the fulfilment of e-democracy	35,10%	48,08%	12,98%	1,92%	1,92%
The personnel of a public agency responds much better when the citizens' requests concerning issues of authority exercise are electronically submitted	12,50%	23,56%	46,63%	15,38%	1,92%
The coordination of the acts of the personnel of all public agencies is a necessary condition for the fulfilment of e-democracy	35,10%	41,35%	18,75%	4,33%	0,48%
Control					
E-democracy reinforces the control of central government by citizens	13,94%	43,75%	33,65%	5,77%	2,88%
Citizens are able, through the Internet, to express their opinions and control the activities of politicians	21,63%	39,42%	28,37%	8,17%	2,40%
E-polling results constitute a tool of developing and controlling the governmental policies	12,98%	36,06%	31,73%	15,87%	3,37%
E-consultation, e- legislation, and e-petitioning assist citizens to control the Parliament's function	14,42%	42,79%	27,88%	10,58%	4,33%

THE SIXTEEN QUALITY CRITERIA	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
Sharing					
The personal data of citizens are protected in an e-democracy system	5,77%	23,56%	41,35%	20,19%	9,13%
Citizen's data transfer from one public agency to another public agency explicitly assumes citizen's authorization	48,56%	29,33%	12,98%	8,65%	0,48%
The accomplishment of political campaigns through the Internet contributes to sensitization and mobilization of citizens regarding political issues	9,13%	40,38%	34,62%	14,42%	1,44%
Citizen's awareness regarding e-legislation makes easier the implementation of the law	16,83%	47,12%	23,56%	9,62%	2,88%
Transparency					
E-voting results are reliable and valid	5,29%	19,71%	40,87%	24,52%	9,62%
Citizens get fully informed, through the Internet, about governmental authority issues	8,17%	22,60%	29,81%	32,69%	6,73%
E-democracy enhances citizen's trust to the democratic rules	10,58%	30,77%	39,90%	12,98%	5,77%
E-participation makes the political decisions more transparent	9,13%	30,77%	39,42%	14,90%	5,77%

Table 14: The sixteen quality criteria

quality criteria: i.e.: "The accomplishment of political campaigns through the Internet contributes to sensitization and mobilization of citizens regarding political issues" and

“Citizen’s awareness regarding e-legislation makes easier the implementation of the law” .

Transparency

The quality dimension of transparency consists of the following quality criteria:

- E-voting results are reliable and valid.
- Citizens get fully informed, through the Internet, about governmental authority issues.
- E-democracy enhances citizen’s trust to the democratic rules.
- E-participation makes the political decisions more transparent.

According to the table 14, the citizens seem to be preoccupied with the quality dimension of transparency as the majority of them neither agree nor agree with the three of the four quality criteria mentioned above. In the fact the 32,69% disagree with the quality criteria that “Citizens get fully informed, through the Internet, about governmental authority issues”.

In the analysis that follows in the chapter 4, it is made obvious that the sixteen quality criteria mentioned above are the core quality criteria of the quality framework used in this research and there is an inter-relation among the sixteen quality criteria.

CHAPTER 4

RESEARCH FINDINGS

Table 15 shows the communalities of the variables v37 to v52, which correspond to the quality criteria in which the four dimensions of e-democracy, namely, coordination, control, sharing, and transparency, were analyzed. As indicated in the table, all the communalities get high values, meaning that all the variables relate to certain components.

Variable	Initial	Extraction
v37	**1.000**	**0.689**
v38	**1.000**	**0.618**
v39	**1.000**	**0.432**
v40	**1.000**	**0.67**
v41	**1.000**	**0.69**
v42	**1.000**	**0.604**
v43	**1.000**	**0.515**
v44	**1.000**	**0.702**
v45	**1.000**	**0.365**
v46	**1.000**	**0.697**
v47	**1.000**	**0.413**
v48	**1.000**	**0.396**
v49	**1.000**	**0.626**
v50	**1.000**	**0.684**
v51	**1.000**	**0.674**
v52	**1.000**	**0.603**

Table 15: Communalities (extraction method: Principal Component Analysis)

The eigenvalues, i.e. the percentages of each variable's variance which is accounted for by the component, are presented in Table 16. The table shows 16 components, as exactly the number of the variables. However, the eigenvalues are high (over than the unity) only for 4 components. As we can see in the last column, 58% of the total variance is accounted for by four components (in general, a percentage over than fifty per cent is considered satisfactory).

Component	Eigenvalue	% of Variance	Cumulative %
1	**5.209**	**32.556**	**32.556**
2	**1.725**	**10.784**	**43.34**
3	**1.229**	**7.683**	**51.023**
4	**1.154**	**7.211**	**58.235**
5	**.901**	**5.632**	**63.866**
6	**.876**	**5.478**	**69.344**
7	**.76**	**4.747**	**74.092**
8	**.629**	**3.934**	**78.026**
9	**.615**	**3.843**	**81.869**
10	**.572**	**3.577**	**85.446**
11	**.499**	**3.12**	**88.566**
12	**.461**	**2.878**	**91.445**
13	**.45**	**2.811**	**94.256**
14	**.375**	**2.346**	**96.601**
15	**.293**	**1.832**	**98.433**
16	**.251**	**1.567**	**100**

Table 16: Total variance explained

The Rotated Component Matrix, in Table 17, shows the loadings, i.e. the correlations between the variables and the corresponding component. Rotation converged in 5 iterations. The first component has high loadings for the variables v37 to v40, the second one for the variables v41 to v44, the third one for the variables v45

to v48, and finally the fourth component has high loadings for the variables v49 to v52. It is reminded that the variables v37-v52 correspond to the sixteen quality criteria, which comprise the four core dimensions of e-democracy.

	Component			
	1	2	3	4
v37	0.784	**0.208**	**0.136**	**-0.227**
v38	0.773	**0.023**	**0.088**	**-0.173**
v39	0.723	**-0.03**	**-0.041**	**0.274**
v40	0.586	**0.214**	**0.289**	**0.159**
v41	**0.07**	0.571	**0.202**	**0.157**
v42	**-0.005**	0.806	**0.313**	**-0.191**
v43	**-0.042**	0.75	**0.19**	**0.046**
v44	**0.274**	0.559	**0.009**	**0.05**
v45	**0.092**	**0.233**	0.818	**-0.045**
v46	**0.133**	**-0.087**	0.736	**0.269**
v47	**0.13**	**0.189**	0.494	**0.114**
v48	**0.141**	**-0.24**	0.43	**0.282**
v49	**0.173**	**-0.211**	**0.301**	0.653
v50	**-0.083**	**0.064**	**-0.172**	0.537
v51	**0.049**	**0.117**	**0.038**	0.768
v52	**-0.262**	**0.192**	**0.065**	0.471

Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization
Table 17**: Rotated component matrix**

Conclusions

E-democracy has been an uprising issue the last years since, as the ICTS become more and more part of citizens' everyday life, it is believed that they can contribute to the development of democracy in the countries by using them for the application of certain practices such as e-participation, e-voting, e-consultation e.t.c..

The research made on the issue of e-democracy in Greece shows that the majority of citizens are aware of the term of e-democracy while the main source of information as regards e-democracy is the Internet that it is proved to be a source of a continuous diffusion of information compared to the traditional mass media. Obviously the comparative advantage of the Internet seems to become more and more overwhelming and may be a reason due to which the great majority of the respondents believe that the internet contributes to the democracy' s enhancement in Greece.

It is widely acceptable that the implementation of e-democracy has got benefits and the most important benefit for those that have participated in this survey is the direct diffusion of the information and the ideas while the less important benefit is the increase in the control on the politicians as it seems that the control on the politicians doubt whether the control of the politicians is achievable or not. The second more significant benefit is the inclusion of all citizens in the democratic processes as the Internet gives the opportunity to all the citizens regardless their age, their physical condition to participate in the democratic processes as well as the benefit of the citizens' participation in the decision making that is considered of significant importance too. The creation of powerful social groups in the Internet that share the same ideas and are united by common characteristics is an important benefit but not as much important as the benefits mentioned beforehand.

However, the implementation of e-democracy is not without obstacles. According to the findings of the research, the obstacle of both the distrust about the safety of the Internet's use and the lack of information about e-democracy are the most significant obstacles for the implementation of e-democracy in Greece. The citizens demand the protection of their personal data given during the implementation of e-democracy practices and the lack of legislation about e-democracy is considered an important obstacle as the citizens are unwilling to participate in processes where there is no legalization. The next more important obstacle is the lack of infrastructure in the

administration as there may be such an increase in demand for e-democracy such as e-participation, e-voting that the administrations can not cope with it, meaning that there is lack of the appropriate political backing, lack of resources and organizational constraints for the application of e-democracy. The less important obstacle is the citizens' refusal to participate in the political processes, meaning that the democratic deficit is not at all important in the implementation of e-democracy as well as it is not considered an important obstacle the lack of access to the Internet since it seems that more and more nowadays it is achieved the accessibility to the Internet. A significant enough obstacle is the so called "pseudoparticipation", as citizens are unwilling to participate when they consider that their participation is meaningless and does not contribute to the political process or when it is believed that it is not given to their participation the appropriate attention and when the citizens distrust about the reliability of the information provided.

As regards the sixteen quality criteria for e-democracy that have been structured based on the quality framework C2ST: dimensional framework that refers to the assessment of e-services delivery, according to the findings of confirmatory PCA, the sixteen quality criteria were properly grouped into the four core dimensions of e-democracy, i.e., coordination, control, sharing, and transparency.

This work should be considered as a step to better comprehend the construct of e-democracy. This can only be done through the analysis and further examination of its components. In order to validate even more the quality framework of the four core dimensions, it is suggested to test it in other countries, where citizens are more familiar with the concept of e-democracy. This is a limitation of our study since the majority of Greeks have not seen in real life many of the aspects of e-democracy. Moreover, the assessment of the relative importance of the four dimensions is a topic which needs further consideration.

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POSTGRADUATES STUDIES IN TOP QUALITY MANAGEMENT

Supervisor: Stiakakis Emmanouil

Research made by: Konstadina Tongaridou

RESEARCH

EVALUATING THE QUALITY OF E-DEMOCRACY PROCESSES: AN EMPIRICAL STUDY IN THE GREEK CONTEXT

Date:……

QUESTIONNAIRE

A. QUESTIONS

GENDER:	Man ☐ Woman ☐
AGE:	18-25 ☐ 26 -40 ☐ 40> ☐
EDUCATION:	Lykeio ☐ University☐ Postgraduates Studies☐
OCCUPATION:	Private sector ☐ Public sector ☐ Retired ☐ Professional ☐ Unemployed☐

A1) How you would characterize the degree to which you use:

	not at all	**little**	**quite**	**enough**	**very much**
PC	☐	☐	☐	☐	☐
The Internet	☐	☐	☐	☐	☐

B. QUESTIONS

B1) Do you know the term e-democracy?

Yes ☐ No ☐

B2) If yes, you have been informed by:

Media☐ Politicians☐ Social environment ☐ Internet☐

Other ☐ Please specify:……..

B3) To which degree have you been informed about the following sectors of e-democracy?

	not at all	**little**	**quite**	**enough**	**very much**
(e-voting)	☐	☐	☐	☐	☐
(E-participation)	☐	☐	☐	☐	☐
(E-legislation)	☐	☐	☐	☐	☐

(E-justice)	☐	☐	☐	☐	☐
(E-mediation)	☐	☐	☐	☐	☐
(E-environment)	☐	☐	☐	☐	☐
(E-consultation)	☐	☐	☐	☐	☐
(E-initiatives)	☐	☐	☐	☐	☐
(E-petitioning)	☐	☐	☐	☐	☐
(E-campaigning)	☐	☐	☐	☐	☐
(E-polling)	☐	☐	☐	☐	☐
(E-parliament)	☐	☐	☐	☐	☐

B4) Do you believe that the Internet contributes to the democracy's enhancement?

☐Yes ☐ No

B5) <u>If yes</u>, how important do you consider the following benefits from the enhancement of e-democracy in Greece?

	not at all	**little**	**quite**	**enough**	**very much**
Citizens' participation in the decision making process	☐	☐	☐	☐	☐
Inclusion of all the citizens (e.g. the disabled) in the processes	☐	☐	☐	☐	☐
Direct diffusion of information-ideas	☐	☐	☐	☐	☐
Creation of powerful social network groups	☐	☐	☐	☐	☐
Increase the control on politicians	☐	☐	☐	☐	☐
Something else. Please	☐	☐	☐	☐	☐

define:	

B6) How important do you consider the following obstacles from the enhancement of e-democracy in Greece?

	not at all	little	quite	enough	very much
Lack of access to the Internet	☐	☐	☐	☐	☐
Lack of information about e-democracy	☐	☐	☐	☐	☐
Lack of infrastructure in the administration	☐	☐	☐	☐	☐
Distrust about the safety of the Internet's use	☐	☐	☐	☐	☐
Distrust about the reliability of the information provided	☐	☐	☐	☐	☐
Lack of legislation about e-democracy	☐	☐	☐	☐	☐
Citizens' refusal to participate in the political processes	☐	☐	☐	☐	☐
Citizens doubt about the possibility of e-democracy's implementation	☐	☐	☐	☐	☐
Something else.Please specify:	☐	☐	☐	☐	☐

C. QUESTIONS

Γ1) Please define the degree to which you agree or disagree with the following quality characteristics of e-democracy

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
E-democracy presupposes the design and development of an integrated information system in every public agency	☐	☐	☐	☐	☐
Integrating the information systems of all public agencies is a necessary condition for the fulfilment of e-democracy	☐	☐	☐	☐	☐
The personnel of a public agency responds much better when the citizens' requests concerning issues of authority exercise are electronically submitted	☐	☐	☐	☐	☐
The coordination of the acts of the personnel of all public agencies is a necessary condition for the fulfilment of e-democracy	☐	☐	☐	☐	☐

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	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
E-democracy reinforces the control of central government by citizens	☐	☐	☐	☐	☐
Citizens are able, through the Internet, to express their opinions and control the activities of politicians	☐	☐	☐	☐	☐
E-polling results constitute a tool of developing and controlling the govern-	☐	☐	☐	☐	☐

mental policies					
E-consultation, e- legislation, and e-petitioning assist citizens to control the Parliament's function	☐	☐	☐	☐	☐
The personal data of citizens are protected in an e-democracy system	☐	☐	☐	☐	☐
Citizen's data transfer from one public agency to another public agency explicitly assumes citizen's authorization	☐	☐	☐	☐	☐

	strongly agree	agree	neither agree nor disagree	disagree	strongly disagree
The accomplishment of political campaigns through the Internet con-tributes to sensiti-zation and mobili-zation of citizens regarding political issues	☐	☐	☐	☐	☐
Citizen's awareness regarding e-legislation makes easier the imple-mentation of the law	☐	☐	☐	☐	☐
E-voting results are reliable and valid	☐	☐	☐	☐	☐
Citizens get fully informed, through the Internet, about governmental authority issues	☐	☐	☐	☐	☐
E-democracy enhances citizen's trust to the democratic rules	☐	☐	☐	☐	☐
E-participation makes the political decisions more transparent	☐	☐	☐	☐	☐

Γ2) Below are given the four basic dimensions of the quality of e-democracy. If you had 100 points that refer to the importance of those dimensions, how you would divide them:

Coordination	
Control	
Sharing	
Transparecy	