
An evaluation framework for e-participation in parliaments

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Abstract: E-participation is a relatively new approach, so it is necessary to evaluate it carefully so that we can improve e-participation practice. This paper describes a framework that has been developed for evaluating a number of e-participation pilots in the legislation development processes of parliaments. The framework is based on the objectives and basic characteristics of 'traditional' public participation, e-participation and the legislation development processes, as well as the existing frameworks for the evaluation of Information Systems (ISs), e-participation and traditional public participation. It includes three perspectives: process, system and outcomes evaluation; each of them is analysed into a number of evaluation criteria.

Keywords: electronic participation (or e-participation); electronic democracy (or e-democracy); public participation; evaluation.

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1 Introduction

An electronic participation (or e-participation) is defined as the extension and transformation of participation in societal democratic and consultative processes mediated by ICTs (Saebo et al., 2008). The OECD proposes a more detailed definition of e-participation, i.e. the use of ICTs for supporting the provision of information to the citizens concerning government activities and public policies, the consultation with the citizens and also their active participation (OECD, 2003a, 2004a). The high diffusion of ICT, which offers a new interactive, cheap, inclusive and unconstrained by time and distance environment for public political communication, and at the same time the trend towards more participation of citizens in the processes of public decision-making and policy-making, and in general establishment of stronger relations between citizens and institutions of governance, have been the main drivers of the emergence and development of e-participation (Coleman and Gotze, 2002). The high potential of modern ICT for supporting citizens’ engagement in the democratic processes of modern representative democracy begins henceforth to be recognised by academics and practitioners (OECD, 2001a, 2001b, 2003a, 2003b, 2004a, 2004b; Macintosh et al., 2002; Timmers, 2007). Local, regional and national governments of many OECD member countries try to extend citizens participation with the provision of an additional effective channel of communication with civil society based on innovative usage of ICT for supporting open and transparent democratic processes of public decision-making (OECD, 2003a, 2004a; Macintosh et al., 2002; Whyte and Macintosh, 2003; Macintosh, 2004);

since the late 1990s, significant amounts of money have been invested by many countries in engaging citizens in public decision-making using ICT, usually exploiting the capabilities and the high penetration of the internet. The European Union has developed an ambitious agenda for 'e-Democracy' as an integral part of its 'e-Commission' initiative and also its 'Better Regulation' approach, which includes the online availability of all legislation and other important official Commission documents, and also the use of 'interactive policy-making' tools for online consultations concerning new legislation (Timmers, 2007).

However, it is widely accepted that despite the significant investments made in e-participation there has been limited attention in evaluating these efforts. OECD (2004b) concludes that

“There is a striking imbalance between the amount of time, money and energy that governments in OECD countries invest in engaging citizens and civil society in public decision-making and the amount of attention they pay to evaluating the effectiveness of such efforts.”

For this reason, OECD (2003a) calls for more activity in the area of e-participation evaluation arguing that

“As governments increasingly support the development of ICTs to enable citizen engagement on policy-related matters, there is a corresponding need to know whether online engagement meets both citizens' and governments' objectives”

since “... The benefits and impacts of applying technology in opening up the policy process to wider public input have yet to be evaluated and articulated”. A similar gap can be observed in e-participation research. Rose and Sanford (2007) from an extensive review of the existing research literature in the area of e-participation conclude that there is a lack of both evaluation studies and established evaluation methodologies, and that only a small number of e-participation evaluation frameworks exist, which have been applied in practice only to a very limited extent; for this reason, they regard the e-participation evaluation as one of the four main research challenges of this area. Similarly, Macintosh and Whyte (2006) argue that there is an 'evaluation gap' in this area and that the evaluation of both offline and online participation “is still a new and emerging area”, which needs much more further research; the same authors (Macintosh and Whyte, 2007) argue that the evaluation of e-participation constitutes a major challenge to “make sense of what has, or has not, been achieved” and “assess the benefits and the impacts of applying technology to the democratic process”.

Taking into account that e-participation is a relatively new approach, its practices and processes have not reached high levels of maturity yet, it is absolutely necessary to evaluate it carefully, to understand it better, acquire more knowledge about it and identify both the advantages and benefits it offers, and also at the same time its disadvantages, shortcomings and problems. The evaluation of e-participation efforts and pilots is of critical importance for identifying successful e-participation practices, processes and systems, which are appropriate for achieving specific participation objectives in specific situations and contexts, and also for improving e-participation practices, processes and systems, and, in general, for achieving a higher maturity of it. The knowledge acquired through evaluation is very useful for e-participation sponsors, organisers and participants.

In this direction, this paper presents a framework that has been developed for evaluating a number of e-participation pilots in the legislation formation processes of the national parliaments of Austria, Greece and Lithuania as part of the LEX-IS project (“Enabling Participation of the Youth in the Public Debate of Legislation” among Parliaments, Citizens and Businesses in the European Union) (www.lex-is.eu) of the ‘eParticipation’ Preparatory Action of the European Commission. The LEX-IS Project aims at improving the legislation formation processes in the national parliaments by enhancing public participation in the legislation proposal formation stage and in the stage of debate on draft legislation through the use of advanced ICT-based tools and methods, such as argumentation systems, ontologies, arguments and legislation visualisation techniques (Loukis et al., 2007a, 2007b). This project aims to give to all the parties affected by a new legislation under formation (citizens, businesses, youth, etc.) enough scope and electronic means to defend their own interests, exercise their right to be engaged in the decisions that touch their lives and express the small, but valuable, piece of information, experience and knowledge that each of them possesses about the problem or issue addressed by the new legislation.

The structure of the paper is as follows. In the following Section 2 is described the methodology we adopted for developing our evaluation framework. Then, in Sections 3–5 are outlined the basic objectives and characteristics of the public participation, the e-participation and the legislation formation, respectively, which are taken into account for the development of this framework. In Sections 6–8, the existing frameworks for the evaluation of traditional ISs, public participation and e-participation, respectively, which are also taken into account for the development of this framework, are reviewed. Then, in Section 9, we present a framework for evaluating e-participation in the legislative formation processes of parliaments, which has been based on the above-mentioned foundations. Finally, in Section 10, the main conclusions are summarised and our next steps are briefly described.

2 Methodology

The methodology of ISs evaluation has been a highly important and extensively researched topic for long time (Hirschheim and Smithson, 1988; Smithson and Hirschheim, 1998; Farbey et al., 1999; Irani, 2002; DeLone and McLean, 2003; Venkatesh et al., 2003; Irani et al., 2006, 2008). Previous relevant literature emphasises that it is a difficult and complicated problem, because the benefits and value created by IS are complex and multidimensional, both tangible and intangible, so it is difficult and complicate to determine ‘what to measure’ for the evaluation and ‘how’; furthermore, since different types of ISs have quite different objectives and produce different types of benefits and value, they require different specialised ‘measurements’ and evaluation methods. Therefore, to develop a framework for evaluating a particular type of IS, it is necessary to take into account both the generic ISs evaluation concepts and frameworks and also its particular characteristics and objectives. Especially for the evaluation of e-government IS, the relevant literature (e.g., Irani et al., 2008) emphasises its inherent difficulties, argues that ‘traditional’ investment evaluation methods built around accountancy and monetary terms (e.g., net present value, return on investment, etc.) are inadequate, and recommends that a plethora of hard, soft, social and

organisational aspects associated with the particular characteristics and objectives of e-government should be taken into account.

In this direction, we view e-participation in the legislation formation processes of parliaments as a special type of e-government, which attempts to enable and facilitate public participation of all the parties affected by a new legislation through the use of appropriate IS; therefore, as basic foundations for developing a framework for evaluating e-participation in the legislation formation processes of parliaments should be used:

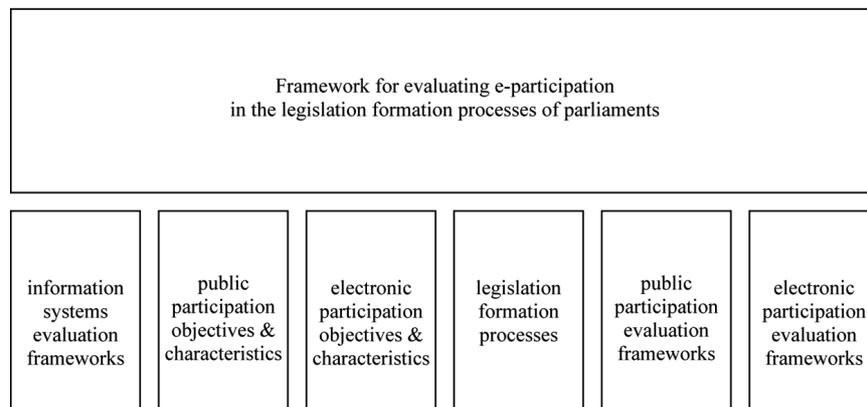
- the generic ISs evaluation methodologies and frameworks
- the particular objectives and basic characteristics of public participation
- the particular objectives and basic characteristics of electronic participation
- and the particular objectives and basic characteristics of legislation formation processes.

Additionally, it is necessary to take into account as well and use elements of existing frameworks:

- for the evaluation of traditional public participation
- and for the evaluation of e-participation.

These six basic foundations of our framework are shown in Figure 1, and are analysed and discussed in the following six sections (3–8).

Figure 1 Basic foundations of the proposed framework for evaluating e-participation in the legislation formation processes of parliaments



3 Public participation

Held (1987), combining the work of three important thinkers, Pateman, Macpherson and Poulantzas, referred to an emergent new model of democracy, which he termed ‘participatory democracy’. A key principle of this model is that

“the equal right to self-development can only be achieved in a participatory society, a society which fosters a sense of political efficacy, nurtures a concern for collective problems and contributes to the formation of a knowledgeable citizenry capable of taking a sustained interest in the governing process.” (Held, 1987, p.262)

In this direction, Rowe and Frewer (2004) define public participation as

“the practice of consulting and involving members of the public in the agenda-setting, decision-making and policy-forming activities of organisations or institutions responsible for policy development.”

they view it as a move away from an ‘elitist model’, in which managers and experts are the basic source of regulations and public policies, to a new model, in which citizens have a more active role and voice. Participatory democracy attempts to give a solution in the so-called ‘deficit of democracy’ and the abstention and disengagement of citizens from politics. It should be emphasised that the objective of participatory democracy is not the overthrow of the establishment and the implementation of a new order; it functions as a remedial and not as a revolutionary measure. It does not foster conflicts among social groups of each society, but tries to feature a practical way of co-existence; the basic idea of this model is the exchange of views among citizens, to form a core, a synthesis of their opinions.

Public participation implies for a citizen to be both adequately informed about politics and able to participate in political activities. These practices may take the form of direct actions to influence the behaviour of political actors as well as the election of representatives at all levels of government. They can also entail both conventional and unconventional endeavours, depending on whether they occur via institutional channels of political representation, such as political parties, or interest groups. It should be emphasised that interest groups have become a very important form of political organisation today. In fact, what they do is to try with various methods to convince the government for the tenability and legitimacy of their demands and to negotiate the degree and the terms of their realisation. The theorists who mostly examined the dynamics of these ‘group politics’ come from two schools of thought of political science, that of Pluralists and that of Marxists (and neo-Marxists). According to the Pluralists, interest groups, as a form of political organisation and action, exert influence, exercise a democratic function and cover a wide spectrum of social groups; they argue that all citizens, up to some degree, participate in an interest group and that these groups altogether equally influence the processes of decision-making (Bell, 1988). On the other hand, Marxists consider that the activities of these groups are not transparent and not subject to control, and do not follow democratic processes; besides, Marxists argue that there are very few interest groups that hold true political influences, so that only a small percentage of society is represented through them (Garson, 1978). A synthetic conclusion from these existing theories is that although interest groups may possess some negative characteristics under specific circumstances, they contribute to the enlargement of participation, since they offer alternative channels of political participation, not only to citizens who already participate to politics, but also to those who are politically detached. Extending the limits of political participation, they incorporate and include into the political system social groups that are marginalised or excluded from this. Their basic advantage is that they have the ability to format the demands of different social groups,

which in opposite case would remain ignored, and to channel them into the society (Held, 1987).

The three aforementioned basic participationist authors, Pateman (1970), Macpherson (1977) and Barber (1984), have formed a core theory about the “educative virtue of participation”, which regards participation, especially direct and at the local level, as the best way to improve representational practices. That is, by participating, citizens would become more competent, more respectful of other citizens’ rights, and also more committed to democracy. Therefore, the main issue in political participation becomes ‘who participates’, ‘how’ and ‘how much’? However, the literature on political participation has until now dealt mainly with the quantity of political participation, without paying much attention to its quality. Therefore, it is necessary to investigate as well the quality of political participation, which would take into account the level and the quality of information provided to participants, and also the quality of the contributions made by them.

From several OECD studies (OECD, 2001a, 2001b, 2004b), it has been concluded that governments of many countries have made considerable efforts to apply and realise the above-mentioned ideas in practice, promote public participation and strengthen their relations with the citizens, regarding them as sound investments in better policy making and as a core element of good governance. In particular, governments initiate and support the following three types of interactions with their citizens in various stages of the public policy-making cycle, from the agenda-setting stage up to the monitoring and evaluation stage:

- *Information provision*: a ‘one-way relation’, in which government produces and delivers information to be used by citizens
- *Consultation*: an asymmetric ‘two-way relation’, in which citizens provide views and feedback to government on issues and questions that government has previously defined
- *Active participation*: a more symmetric ‘two-way relation’ between government and citizens, in which citizens have a wider role in proposing policy options and shaping the policy dialogue, but the government still has the responsibility for the final decisions or policy formulation.

The main objectives of governments in initiating and supporting these three types of interactions are:

- improving the quality of public policies, by taking advantage of valuable policy-relevant sources of information, perspectives and potential solutions, which exist in the society
- responding to the expectations of citizens’ that their voices should be heard and their views should be seriously considered in decision making and public policy making by all levels of government
- responding to calls for greater government transparency and accountability
- strengthening public trust in government and reversing the declining confidence in politics and key public institutions.

For achieving these objectives, governments use several 'offline' methods designed to inform, consult and involve those affected by particular decisions and public policies (Rowe and Frewer, 2000); the most widely used of them are public hearings/enquiries, public opinion surveys, citizens' juries/panels, focus groups, citizen/public advisory committees, consensus conferences, negotiated rule making and referenda. Also, for achieving these objectives, governments have started using various ICT-based methods, which are collectively referred to as 'e-participation' methods, and are discussed in the following methods.

4 Electronic participation

It is widely recognised that ICT, and especially internet-based ones, have the potential to support and enhance public participation in government decision-making and public policy-making, and especially the above-mentioned three basic types of interactions between governments and citizens (OECD, 2001a, 2001b, 2003a, 2004a, 2004b; Macintosh et al., 2002; Whyte and Macintosh, 2003). For this reason, the fundamental concept of electronic government (or e-government), defined by OECD as "The use of Information and Communication Technologies (ICTs), and particularly the Internet, as a tool to achieve better government" (OECD, 2003b), has been extended to include the electronic support of democratic processes (electronic democracy or e-democracy) including public participation (electronic participation or e-participation). So, e-government today does not concern merely the digitalisation of certain internal processes of public organisations and the provision to the citizens of e-services/e-transactions capabilities, but is conceived as a system of ICT-based interventions, which encompasses the whole spectrum of governmental processes, including the participation of citizens in government decision-making and policy-making processes.

In this direction, OECD (2003a, 2004a) defines e-participation as the use of ICTs for supporting the provision of information to the citizens, the consultation with them and also their active participation in all the stages of the policy-making life cycle: agenda-setting, policy analysis, policy formulation, policy implementation and policy monitoring/evaluation; in these OECD reports for each of the above-mentioned three basic dimensions of e-participation (information, consultation and active participation) and for each of the above-mentioned five stages of the policy-making life cycle are proposed appropriate supporting ICT tools. The relevant literature reports that e-participation is related with the interaction between new technologies and participation; this concept involves the idea that the new technologies have a potential for enabling important ICT-mediated innovations in political practices supporting and facilitating direct and massive citizen participation (Coleman et al., 2005). The e-participation tools and methods can support efficiently and effectively citizen-centric processes, which allow the engagement of citizens in the voting of elected representatives, in the processes via which policies are shaped and in the decisions referring to the provision of public services (Kearns et al., 2002). Macintosh and Whyte (2006) suggest that e-participation concerns the use of ICT for supporting either the provision of information and the 'top-down' engagement of citizens, e.g., via initiatives promoted by the government, or 'ground-up' efforts that enable citizens, organisations of civil society and other democratically established groups to convey their needs and opinions

to elected representatives, so that they can act as ‘producers’, rather than just consumers, of policy.

The objectives of e-participation simultaneously reflect the reasons for which the governments involve or should involve citizens in the democratic processes (OECD, 2001a, 2004a). First of all, via electronic participation, more efficient and acceptable public policies can be formulated. The intensification of relations between government and citizens encourages the latter to deal with the public affairs and provide to government valuable views and opinions, which incorporate their experience and knowledge concerning the complex problems of modern societies and potential solutions. In this way, a better base can be provided to the government for policy formulation. Furthermore, e-participation can lead to higher acceptance and more effective application of policies, if citizens are properly informed about them and also have participated in their formulation. All the above contribute to the generation of more trust between citizens and government and to higher legalisation of the government. Also, by giving the opportunity to contribute to government decision-making and policy-making process to all citizens affected via appropriate and widely available electronic means, corruptness can be reduced, power and authority of interest groups can be balanced and, finally, more transparency and openness can be achieved.

Moreover, the e-participation tools and methods can provide a podium and extensive participation capabilities even to those being on the fringe, and therefore contribute to the reduction of social exclusion. These electronic initiatives may bring citizens of different groups, mentalities and values closer and allow them to exchange opinions and form networks. The use of interaction support tools, such as the discussion forums, has the potential to connecting citizens with the political process. The tools and methods of e-participation can facilitate engagement in public policy-making of less politically involved groups, like young people, minorities and lower socio-economic classes (Coleman et al., 2005), and also can contribute to reversing the observed decline in interest and participation in political activities (Acland, 2003).

According to OECD (2004a), the main objectives of the governments that adopt e-participation practices are:

- reaching and engaging with a wider audience
- providing to them policy-relevant information
- enable more in-depth consultation
- facilitating the analysis of citizens’ contributions
- providing relevant and appropriate feedback to citizens
- producing better-quality policy
- building trust and gaining acceptance of policy
- sharing responsibility for policy making
- monitoring and evaluation of public policies.

However, to achieve the above-mentioned objectives, the ICT-based public deliberation should be characterised by (Coleman and Gotze, 2002):

- access of participating to comprehensive, balanced and accessible information on the debated issues
- agenda open to revision or expansion by the participating citizens
- sufficient time to consider the debated issues extensively
- freedom from manipulation or coercion and protection of the free thought of participating citizens
- an appropriate rule-based framework for discussion
- participation by a representative and inclusive sample of citizens, which involves confronting digital divide and providing opportunities to citizens who feel politically alienated, socially marginalised, less literate or unconfident
- scope for free interaction between participants
- recognition of differences between participants, but rejection of status-based prejudice.

The above-mentioned objectives and characteristics of the ‘offline’ and ‘online’ participation analysed in Sections 3 and 4, respectively, in combination with the particular characteristics of the legislation formation processes discussed in Section 5, should be the basic foundations for developing frameworks for the evaluation of e-participation in the legislation formation processes of parliaments.

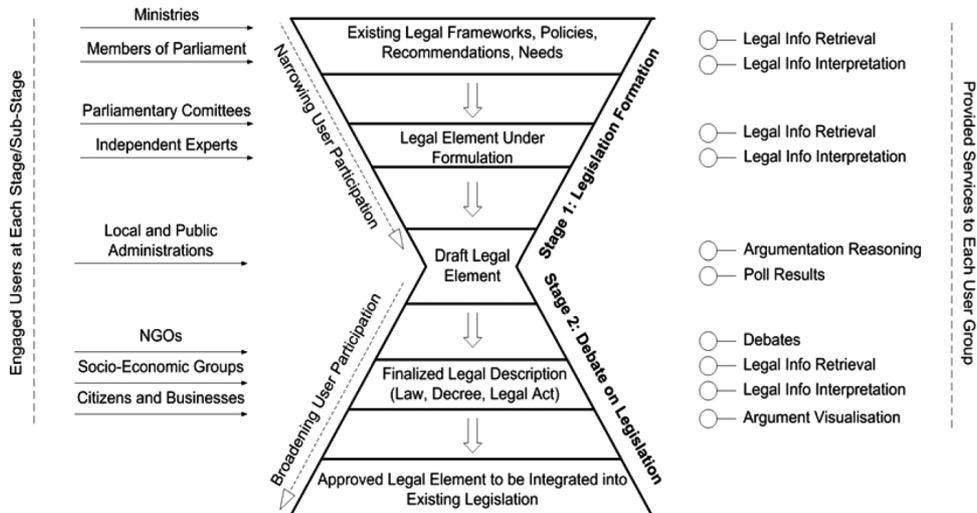
5 Legislation formation process

The legislation formation process has been modelled and analysed in three European countries (Austria, Greece and Lithuania) as part of the LEX-IS project, and the main conclusions as to its basic pattern are summarised by the model shown in Figure 2 (Loukis et al., 2007a, 2007b). We remark that the legislation formation process is characterised by high complexity and consists of two basic stages, the initial draft legislation formation and the debate on draft legislation, each of them including several sub-stages. In each of them, several meetings take place and numerous documents are produced. In these meetings, participate many different stakeholders, such as experts from ministries, independent experts, members of parliament, parliamentary committees, politicians, public servants, representatives of the affected socio-economic groups and non-governmental organisations, and to much lower extent affected individual citizens. Each of these stakeholders’ groups has a different piece of information, experience and knowledge about the problem or issue addressed by the legislation under formation, so a ‘synthesis’ for these pieces is required. Also, these stakeholders’ groups usually do not have the same needs, concerns, interests and expectations concerning the legislation under formation and very often there are conflicts between them. So, a basic objective of the legislation formation process, which is of critical importance for the quality and effectiveness of the legislation, is these stakeholder groups to participate actively,

communicate, interact and sometimes even negotiate (as it happens in the ‘negotiated rule making’ (Coglianese, 1997)), so that a mutual understanding can be developed and finally consensus can be achieved to the largest possible extent.

In particular, as we can see in Figure 2, the entire legislation formation process resembles two cones connected at their bottoms. In the first stage of the draft legislation formation are engaged a relatively broad base of participants to discuss upon legislation, policies and needs. As we move on through that stage, the participants become fewer and more specialised and sophisticated (e.g., parliamentary committees) proceeding towards the formulation of the draft legislation. The second stage starts taking as input the draft legislation and includes several levels of debate on it, gradually engaging more and more participants, which aim to develop the final form of the legislation.

Figure 2 The legislation formation process



6 Evaluation of information systems

Extensive research has been conducted in the last 30 years concerning the methodology of IS evaluation (Land, 1976; Hirschheim and Smithson, 1988; Farbey et al., 1995; Smithson and Hirschheim, 1998; Farbey et al., 1999; Irani and Love, 2001; Irani, 2002; Love et al., 2005; Irani et al., 2006), motivated by the big IS investments being made by private and public organisations, which necessitate an investigation of the value they produce. This research has concluded that IS evaluation is a highly complicated task since it is characterised by a number of inherent difficulties and complexities:

- The benefits and in general the value created by most categories of IS are complex and multidimensional, both tangible and intangible, so it is difficult to decide ‘what to measure’ for the evaluation and ‘how’.
- Different IS categories have quite different objectives and produce different types of benefits and value, so they require different kinds of ‘measurements’ and evaluation methods. For this reason, it is not possible to develop a generic

“best IS evaluation method” suitable for all IS categories; so the optimal approach is to develop specialised IS evaluation frameworks for particular types and categories of IS reflecting, which can be customised and elaborated for each particular IS evaluation we have to perform.

- As IS usually affects multiple stakeholders (e.g., various levels of management, various groups of users, IS experts, project team, etc.), with different concerns, value systems and agendas, IS evaluation has to take into account all these different perspectives, and examine both the positive and the negative impact of IS on each group of stakeholders.

There are many IS evaluation methods proposed by the relevant literature, which can be divided into two basic categories (Smithson and Hirschheim, 1998). The first category consists of ‘efficiency-oriented’ methods, which have been influenced mainly by engineering approaches, and evaluate the performance or quality of an IS with respect to some detailed specifications, being concerned mainly with the question “is it doing things right?” The second category consists of “effectiveness-oriented” methods, which have been influenced mainly by management science approaches, and evaluate how much an IS supports the execution of business-level tasks or the achievement of business-level objectives, being concerned with the question “is it doing the right things?” as well. Farbey et al. (1999) provide a framework, named the “benefits evaluation ladder”, for classifying IS according to the method required for evaluating the benefits they offer. It consists of the following eight IS categories, named “ladder rungs”: mandatory IS, automation IS, direct value-added IS, Management Information and Decision-Support Systems (MIS–DSSs), infrastructure IS, inter-organisational IS, strategic IS and business transformation enabling IS. Moving up the ladder increases not only the potential benefits, but also the uncertainty of outcomes, the risk of failure and the difficulty-complexity of benefits evaluation. For each of the above rungs, a different evaluation method is proposed: while in the lower rungs (e.g., for mandatory or automation IS) the evaluation is based on the precise quantification of benefits and costs, in the higher rungs (e.g., for strategic or business transformation enabling IS) the evaluation is mainly judgemental and requires the involvement of the higher management. Subsequent research literature in this area (Irani, 2002; Love et al., 2005; Irani et al., 2006) emphasises the need for IS evaluation methods specialised to specific types of IS or even to specific industries, which take into account their particular objectives and characteristics.

Taking into account the above-mentioned fundamental characteristics of IS evaluation, it can be concluded that an evaluation framework for e-participation in the legislation formation processes of parliaments should be founded on the particular objectives and concerns of the main stakeholders and also cover both the ‘efficiency’ and the ‘effectiveness’ perspectives.

7 Evaluation of public participation

It has been recognised that the evaluation of public participation projects and activities is important for all parties involved in them: the sponsors that initiate them, the organisers running them, the participants and also the uninvolved but affected public.

For these reasons, there are many studies in the literature reporting evaluations of public participation in various public policy domains (e.g., environment, transport, biotechnology, services for ageing population, etc.) using various criteria; comprehensive reviews of these studies are provided by Chess and Purcell (1999) and Rowe and Frewer (2004). Although there have been some attempts for specifying complete sets of criteria for evaluating public participation, it is acknowledged that there are no established evaluation methods and criteria in this area (Rowe and Frewer, 2000, 2004). Also, most of the methods and criteria that have been used in previous studies for the evaluation of public participation are procedural rather than substantive, in that they relate to what makes for an effective public participation process, rather than how to measure the effectiveness of outcomes; however, it is necessary to pay a balanced attention both to public participation ‘process’ and ‘outcomes’.

It is interesting to analyse the most important of the public participation evaluation frameworks reported in the relevant literature, as they include elements that can be useful for the development of a framework for the evaluation of e-participation in the legislation development processes of parliaments. Webler (1995) proposes a public participation evaluation framework consisting of criteria along two basic dimensions: ‘fairness’ (assessing to what extent it is perceived by the public as fair and democratic) and ‘competence’ (assessing to what extent the conclusions have been drawn in an effective manner). Petts (1995) evaluates community involvement and consensus building concerning waste management based on five criteria: impact on decision process, knowledge achieved compatibility with participants’ objectives, representativeness and effectiveness of method and process.

It is worth describing in more detail the generic framework for evaluating public participation developed by Rowe and Frewer (2000). It includes two categories of evaluation criteria: the ‘acceptance’ criteria, which are related to the public acceptance of the procedure, and ‘process’ criteria, which are related to the implementation and effectiveness of the procedure. The particular criteria of each category are:

- *Acceptance criteria*
 - Criterion of representativeness (the public participants should comprise a broadly representative sample of the population of the affected public).
 - Criterion of independence (the participation process should be conducted in an independent and unbiased way).
 - Criterion of early involvement (the public should be involved as early as possible in the process as soon as value judgements become salient).
 - Criterion of influence (the output of the procedure should have a genuine impact on decisions and policy).
 - Criterion of transparency (the participation process should be transparent, so that the public can see what is going on and how decisions are being made).

- *Process criteria*
 - Criterion of resource accessibility (public participants should have access to the appropriate resources to enable them to successfully fulfil their brief (information resources, human resources, material resources and time resources).
 - Criterion of task definition (the nature and scope of the participation task should be clearly defined, so that there is no confusion or dispute concerning the scope of the participation, the expected output and the procedure).
 - Criterion of structured decision-making (the participation procedure should include appropriate mechanisms for structuring and displaying the decision-making process).
 - Criterion of cost-effectiveness (the participation procedure should in some sense be cost-effective).

An improved version of the above-mentioned public participation evaluation framework has been used by Rowe et al. (2004), for assessing 'process' and 'outcome' of citizens participation in a 'deliberative conference' (addressing sponsor's policy for assessing radiation doses in food) using nine criteria.

We should also mention the study of Coglianesi (1997), which is relevant to the legislative process in specific; this study compares the negotiated rule making with the 'traditional' rulemaking process, using two criteria:

- the decreased time to develop regulations (calculating the number of days for completion of rules for negotiated rule making and traditionally derived rules)
- the reduction or elimination of subsequent judicial challenges (collecting data on litigation of negotiated and traditionally derived rules).

8 Evaluation of e-participation

It is widely acknowledged that there are no established complete methodologies for the evaluation of e-participation (e.g., see Rose and Sanford, 2007; Macintosh and Whyte, 2006); there are only some frameworks suggesting dimensions and criteria that should be taken into account for evaluating e-participation. These frameworks include elements that can be useful for the development of a framework for the evaluation of e-participation in the legislation development process; for this reason, in the following paragraphs are briefly reviewed the most important of them.

Whyte and Macintosh (2003) proposed a framework for evaluating e-consultation from political, technical and social perspective:

- The political evaluation is based on the following criteria: clarity concerning the e-consultation objectives, the roles and responsibilities of both the participating citizens and the competent government organisations, the extent of influence of participating citizens, the owners and the actors; also to what extent the targeted participant groups have actually participated, how accessible and understandable was the information provided to the participants before entering the e-consultation,

and whether the e-consultation took place early enough in the policy life cycle so that it can influence decisions, and finally adequacy of time, adequacy of financial, human and technical resources and extent of giving feedback to the participants during and after the e-consultation.

- The technical evaluation assesses whether the ICT system that has been used was easy-to-use and appropriate for the targeted participants groups; it is based on software usability and accessibility frameworks and its main criteria are: clarity, organisation and consistency of screens, informative feedback, simple error handling, easy reversal of actions, appropriate language, user control of the pace of interaction, adequate shortcuts for the frequent users, accessibility by people with disabilities, etc.
- The social evaluation assesses to what extent the social practices and capabilities of the participants have affected the consultation outcomes.

The OECD (2003a, 2004a) has developed a framework consisting of seven “issues for the evaluation of online engagement”, each of them having the form of a basic question further analysed into a number of sub-issues/sub-questions:

- Was the e-consultation process conducted in line with best practice? (Ask stakeholders if they are satisfied with the process, assess whether adequate resources were in place to conduct the consultation, check whether process followed best practice guidelines, assess whether the choice of an online tool was appropriate for the consultation.)
- Were the consultation objectives and what was expected of the citizens made clear? (Ask stakeholders if they understand what is being asked, assess whether the participants’ contributions were appropriate.)
- Did the consultation reach the target audience? (Assess the adequacy of the promotion of the e-consultation, identify who and where potential participants are, in terms of demographic and geographic characteristics.)
- Was the information provided appropriate and relevant? (Assess how easily the participants can access the information, assess whether the participants’ contributions were informed by it.)
- Were the contributions informed and appropriate? (Assess to what extent the contributions address the consultation issue, assess how easily the participants can access contributions from others, classify contributions according to whether they provide information, ask questions or make suggestions, assess to what depth contributions respond to other contributions.)
- Was feedback provided both during and after the consultation? (Assess whether questions are answered by government during the consultation, assess the extent to which the government feedback relates to the contributions.)
- Was there an impact on policy content? (Check to what extent a change of policy is possible given the stage in the decision making the consultation occurred, assess to what extent contributions are reflected in the revised or newly formulated policy.)

Henderson (2005) also provides an “e-democracy evaluation framework”, which consists of a set of key evaluation dimensions that address the issues of:

- Effectiveness (Do the initiatives deliver intended outcomes? To what extent are designated objectives met?)
- Equity (Is there equitable access to the benefits of the initiatives?)
- Quality (What is the level of user and stakeholder satisfaction? Are relevant benchmark standards met?)
- Efficiency (Do the initiatives provide value for money?)
- Appropriateness (Are the e-democracy initiatives appropriate for the particular context at this time? Do they provide a relevant response to identified needs or opportunities in this area?)
- Sustainability (Do the initiatives provide a durable and generalisable approach to achieving the desired outcomes?)
- Process (How can the current initiatives be enhanced to provide better outcomes?).

A holistic approach for the evaluation of e-participation initiatives of local government is provided by Macintosh and Whyte (2006, 2007), who suggest a framework developed around three dimensions: the evaluation perspectives, the analysis methods and the actors involved. The evaluation perspectives include three overlapping views: democratic, project and socio-technical. In particular:

- The democratic perspective considers the main democratic aspects that the e-participation initiative is addressing. The most important of them and at the same time the most difficult to understand is to what extent the e-participation affects policy. Other criteria of this perspective can be the effect on representative democracy and involved representative institutions and government, transparency, political equality and community control, and also the adequacy of mechanisms for conflict management and consensus building.
- The project perspective assesses the extent of accomplishment of the aims and objectives of each particular e-participation initiative, as set by its project management team. Criteria of this perspective can be the extent of engaging with a wider audience, obtaining better informed opinions, enabling more in-depth consultation, providing feedback to citizens and cost-effectiveness of contributions’ analysis.
- The socio-technical perspective considers to what extent the design of the ICTs directly affects the outcomes and encompasses aspects of usability, usefulness and acceptability, which can be assessed using established frameworks from the software engineering and IS domains.

Finally, another useful source of elements for constructing a framework for the evaluation of e-participation from a process viewpoint can be the existing e-participation organisation frameworks, which consist of guiding principles for successfully organising

e-participation, such as the one proposed by the OECD (2003a, 2004a), which proposes 10 guiding principles: start planning early, demonstrate commitment, guarantee personal data protection, tailor approach to fit target group, integrate online consultation with traditional methods, test and adapt ICT tools, promote the online consultation, analyse the results, provide feedback and evaluate consultation process and impact.

9 A framework for evaluating e-participation in the legislation formation process

On the basis of the methodology described in Section 2, and the foundations described in Sections 3–8, a framework for evaluating e-participation in the legislation formation processes of parliaments has been developed. In particular, this framework has been constructed through:

- a synthesis of elements from the above-mentioned three categories of evaluation frameworks presented in Sections 6–8 (for ISs, public participation and e-participation, respectively)
- also taking into account the objectives and the basic characteristics of the public participation and the e-participation presented in Sections 3 and 4, respectively
- also the particular characteristics of the legislation formation processes in the parliaments, which have been analysed in the LEX-IS Project and have been briefly described in Section 5.

Also, have been taken into account the concerns of the main stakeholders' groups:

- affected groups of citizens by the legislation under development and their associations
- members of Parliament
- experts from the responsible/competent Ministry
- independent experts.

The proposed framework for evaluating e-participation in the legislation formation processes of parliaments is organised around three evaluation perspectives:

- Process (PRO)
- System (SYS)
- Outcomes (OUT).

Each of them includes a number of evaluation criteria, which can be analysed further into sub-criteria, etc. It assesses all the three basic dimensions of both 'traditional public participation' and e-participation according to OECD (information provision, consultation and active participation) (OECD, 2001a, 2001b, 2003a, 2003b, 2004a, 2004b) in the legislation formation context. Also, it includes all the seven "issues for the evaluation of online engagement" proposed by OECD (2003a, 2004a) appropriately

adapted to the parliamentary context. Furthermore, it assesses all the evaluation dimensions proposed by the model of ISs success of Delone and McLean (2003): information quality, systems quality, use, user satisfaction, individual impact and organisational impact, adapted to the context of the legislation formation processes.

The Process (PRO) perspective aims to assess the process that has been followed in the particular e-participation project. It has been influenced by the ‘efficiency evaluation’ proposed by Smithson and Hirschheim (1998) and the ‘process’-related dimensions that most ‘traditional’ public participation and e-participation evaluation frameworks include. Also, it incorporates part of the ‘political evaluation’ concept of the Whyte and Macintosh (2003) framework, and the ‘information quality’ of the Delone and McLean (2003) ISs success model. The Process perspective includes 16 criteria as shown in Table 1.

Table 1 Evaluation criteria of the process perspective

| | |
|--------|--|
| PRO1: | Clarity of objectives |
| PRO2: | Clarity concerning the participants and the roles and responsibilities of each |
| PRO3: | Clarity concerning the main political sponsor |
| PRO4: | Adequacy of time |
| PRO5: | Adequacy of resources (human, technical, financial) |
| PRO6: | Appropriate promotion to potential participants |
| PRO7: | Participants’ personal data protection |
| PRO8: | Quantity and quality of the background information provided to the participants (how complete, objective, correct, reliable, relevant, useful and clear/understandable this information was) |
| PRO9: | Quality of the facilitator/moderator |
| PRO10: | Analysis of contributions of participants |
| PRO11: | Publication of the results and conclusions of the analysis of contributions |
| PRO12: | Feedback to the participants concerning how their contributions will be (or have been) used and integrated in the Parliamentary decision-making process |
| PRO13: | Commitment of the competent politicians and public servants |
| PRO14: | Adequacy of the whole e-participation project design |
| PRO15: | The time required to complete the process in relation to the time previously needed |
| PRO16: | The multiplicity of channels for participation provided to stakeholders |

The System (SYS) perspective aims to assess the ICT system that has been used in the particular e-participation project. It has been influenced by the ‘ease of use’ concept of the ‘Technology Acceptance Models’ (TAMs) (Venkatesh et al., 2003), which is an important determinant of IS acceptance and use, the ‘system quality’ dimension of the Delone and McLean (2003) ISs success model, and the ‘technical evaluation’ concept of the Whyte and Macintosh (2003) framework; it constitutes another aspect of the ‘efficiency evaluation’ proposed by Smithson and Hirschheim (1998). This perspective includes 11 criteria as shown in Table 2.

Table 2 Evaluation criteria of the system perspective

| | |
|--------|--|
| SYS1: | Appropriateness of the ICT system for engaging the targeted participants |
| SYS2: | General ease of use of the ICT system by the participants |
| SYS3: | Organisation, simplicity and clarity of screens |
| SYS4: | Simple error handling |
| SYS5: | User control of the pace of interaction |
| SYS6: | Easy reversal of actions |
| SYS7: | Accessibility by people with disabilities |
| SYS8: | Ease of accessing the background information provided to the participants |
| SYS9: | Ease of posting a contribution in the forum |
| SYS10: | Ease of accessing the contributions of the other participants in the forum |
| SYS11: | Technical quality (response time, downtime, etc.) |

Finally, the Outcome (OUT) perspective aims to assess the outcomes from a political viewpoint of the particular e-participation project, with main emphasis on stakeholders' extent of participation, contributions, interaction and satisfaction, and also on the impacts on the quality, the acceptance and the applicability of the legislation under development. It has been influenced by the 'effectiveness evaluation' concept proposed by Smithson and Hirschheim (1998), the 'use', 'user satisfaction', 'individual impact' and 'organisational impact' dimensions of the Delone and McLean (2003) ISs success model, and the 'usefulness' concept of the TAM (Venkatesh et al., 2003), which is an important determinant of IS acceptance and use. It has also been influenced by the objectives of the governments adopting public participation and e-participation according to OECD (2001a, 2001b, 2003a, 2003b, 2004a, 2004b), the 'outcomes'-related dimensions that most public participation and e-participation evaluation frameworks include and part of the 'political evaluation' concept of the Whyte and Macintosh (2003) framework. The Outcomes perspective includes 21 criteria as shown in Table 3:

Table 3 Evaluation criteria of the outcome perspective

| | |
|-------|---|
| OUT1: | Extent of participation of citizens affected by the legislation under development |
| OUT2: | Extent of participation of the main interest groups affected by or associated with the legislation under development |
| OUT3: | Extent of participation of less politically involved groups (e.g., young people, minorities, lower socio-economic classes, etc.) affected the legislation under development |
| OUT4: | Extent of participation of Members of Parliament |
| OUT5: | Extent of participation of experts from the responsible/competent Ministry |
| OUT6: | Extent of participation of independent experts |
| OUT7: | Informed contributions |
| OUT8: | Quality of contributions |
| OUT9: | Pluralism of contributions |

Table 3 Evaluation criteria of the outcome perspective (continued)

| |
|--|
| OUT10: Extent of interaction among participants' (number of contributions on other participants' contributions) |
| OUT11: Extent of conflicts management and consensus building |
| OUT12: Generation of useful information, knowledge and views concerning the topic of the legislation under development, which can be useful for improving it |
| OUT13: Impact of participants contributions on the legislation under development |
| OUT14: Impact on acceptance and applicability of this legislation |
| OUT15: Impact on perceived transparency and trust to government |
| OUT16: Extent of strengthening the Parliamentary decision-making process |
| OUT17: Satisfaction of the citizens who participated |
| OUT18: Satisfaction of the Members of Parliament who participated |
| OUT19: Satisfaction of the experts from the responsible/competent Ministry who participated |
| OUT20: Satisfaction of the independent experts who participated |
| OUT21: Willingness of stakeholders to reuse the systems and processes |

We remark that the above-mentioned three evaluation perspectives are not at the same 'level', since the values of the factors of the Outcome perspective depend on/are affected by (at least to some extent) values of the factors of the Process and System perspectives; in that sense the Outcome perspective can be viewed as a 'second-level' evaluation perspective, while the Process and System perspectives can be viewed as 'first-level' evaluation perspectives.

10 Summary: conclusions

In the previous sections, we have described the development of a framework for evaluating e-participation in the legislation development process. For this purpose, we viewed e-participation in the legislation formation processes of parliaments as a special type of e-government, which attempts to enable and facilitate public participation of all the parties affected by a new legislation through the use of appropriate IS. Therefore, its basic foundations are:

- existing frameworks for the evaluation of ISs
- the objectives and basic characteristics of the traditional offline public participation and e-participation
- existing frameworks for the evaluation of traditional offline public participation and e-participation
- the legislation formation process of the parliaments.

The proposed framework includes three evaluation perspectives: process evaluation (assessing the process that has been followed in a particular e-participation project), system evaluation (assessing the usability and technical quality of the ICT that has been used in a particular e-participation project) and outcomes evaluation (assessing the outcomes from a political viewpoint concerning stakeholders' extent of participation,

contributions, interaction and satisfaction, and also impacts on the quality, the acceptance and the applicability of the legislation under development); each of these three evaluation perspectives has been analysed into a number of evaluation criteria.

This framework will be adapted to the particular characteristics and objectives of each of the e-participation pilots that will be implemented by the national parliaments of Austria, Greece and Lithuania as part of the LEX-IS project, and then will be applied for evaluating them, using both qualitative and quantitative methods; on the basis of experience gained from the above practical application, the proposed framework is going to be modified and improved. As such, it is premature to assess the benefits offered by the framework. However, at this phase of our research, we can safely suggest that it offers a holistic interdisciplinary approach for evaluating e-participation in parliamentary processes; such an approach is necessary taking into account that e-participation in parliamentary processes is the use of ICT systems for achieving political objectives (i.e., for enabling and facilitating public participation of all the parties affected by a new legislation) in a given organisational context (i.e., parliaments' operation and processes); therefore, for the evaluation of e-participation in the legislation development process, it is necessary to combine elements and metrics from the technological, the political and the organisational sciences. In this direction, our contribution at this stage is the experience we gained, and convey in this paper, from combining the different relevant technical, political and organisational parameters involved in the deployment of e-participation practices in a parliamentary environment.

References

- Acland, A. (2003) *E-Participation and the Future of Participation – Dialogue by Design*, accessed from: <http://www.interactweb.org.uk/papers/E-Participation%20and%20the%20Future%20of%20Participation.pdf>
- Barber, B. (1984) *Strong Democracy*, University of California Press, Berkeley.
- Bell, D. (1988) *The End of Ideology*, Harvard University Press, Cambridge.
- Chess, C. and Purcell, K. (1999) 'Public participation and the environment: Do we know what works?', *Environmental Sciences and Technology*, Vol. 33, No. 16, pp.2685–2692.
- Coglianesi, C. (1997) 'Assessing consensus: The promise and performance of negotiated rulemaking', *Duke Law Journal*, Vol. 46, No. 6, pp.1255–1349.
- Coleman, S. and Gotze, J. (2002) *Bowling Together: Online Public Engagement in Policy Deliberation*, accessed from: <http://bowlingtogether.net>
- Coleman, S., Macintosh, A. and Lalljee, M. (2005) 'What works – Key lessons from recent e-participation literature', *Local e-Participation National Project*, accessed from: <http://www.eparticipationworks.co.uk/resources/what%20works.pdf>
- DeLone, W.H. and McLean, E.R. (2003) 'The DeLone and McLean model of information systems success: a ten-year update', *Journal of Management Information Systems*, Vol. 3, No. 1, pp.60–95.
- Farbey, B., Land, D. and Targett, D. (1999) 'IS evaluation: a process of bringing together benefits, costs and risks', in Currie, W. and Galliers, R. (Eds.): *Rethinking Management Information Systems*, Oxford University Press, New York, USA, pp.204–228.
- Farbey, B., Land, F. and Targett, C. (1995) 'A taxonomy of information systems applications: the benefits' evaluation ladder', *European Journal of Information Systems*, Vol. 4, pp.41–50.
- Garson, G.D. (1978) *Group Theories of Politics*, Sage Publications, Beverly Hills and London.
- Held, D. (1987) *Models of Participation*, Polity Press, Cambridge.

- Henderson, M.P. (2005) *E-democracy Evaluation Framework*, accessed from: http://www.getinvolved.qld.gov.au/share_your_knowledge/documents/pdf/eval_framework_summaryfinal_200506.pdf
- Hirschheim, R. and Smithson, S. (1988) 'A critical analysis of information systems evaluation', in Bjorn-Andersen, N. and Davis, G. (Eds.): *Information Systems Assessment: Issues and Challenges*, North Holland, Amsterdam, pp.17–37.
- Irani, Z. (2002) 'Information systems evaluation: navigating through the problem domain', *Information and Management*, Vol. 40, pp.11–24.
- Irani, Z. and Love, P. (2001) 'Information systems evaluation: past, present and future', *Editorial, European Journal of Information Systems*, Vol. 10, pp.183–188.
- Irani, Z., Gunasekaran, A. and Love, P. (2006) 'Quantitative and qualitative approaches to information systems evaluation', *European Journal of Operational Research*, Vol. 173, No. 3, pp.951–956.
- Irani, Z., Love, P. and Jones, S. (2008) 'Learning lessons from evaluating e-government: Reflective case experiences that support transformational government', *Journal of Strategic Information Systems*, Vol. 17, No. 2, pp.155–164.
- Kearns, I., Bend, J. and Stern, B. (2002) *E-participation in Local Government*, accessed from: <http://www.ippr.org/members/download.asp?f=%2Fecomm%2Ffiles%2Fe%5Fparticipation%5Fin%5Flocal%5Fgovernment%2Epdf>
- Land, F. (1976) 'Evaluation of systems goals in determining a design strategy for a computer-based information system', *Computer Journal*, Vol. 19, No. 4, pp.290–294.
- Loukis, E., Wimmer, M., Triantafillou, A., Gatautis, R. and Charalabidis, Y. (2007a) 'Electronic support of participation in the development of legislation: the LEX-IS project', *5th Eastern European eGov Days 2007*, 11–13 April, Prague, Czech Republic.
- Loukis, E., Wimmer, M., Charalabidis, Y., Triantafillou, A. and Gatautis, R. (2007b) 'Argumentation systems and ontologies for enhancing public participation in the legislation process', *EGOV 2007 International Conference*, 3–7 September, Regensburg, Germany.
- Love, P., Irani, Z. and Edwards, D. (2005) 'Researching the investment of information technology in construction: an examination of evaluation practices', *Automation in Construction*, Vol. 14, pp.569–582.
- Macintosh, A. (2004) 'Characterizing e-participation in policy making', *Proceedings of the 37th Hawaii International Conference on System Sciences*, Hawaii, p.10.
- Macintosh, A. and Whyte, A. (2006) 'Evaluating how e-participation changes local participation', *e-government Workshop '06 (eGOV06)*, 11 September, Brunel University, London, UK.
- Macintosh, A. and Whyte, A. (2007) 'Towards an evaluation framework for e-participation', *Workshop on Frameworks and Methods for Evaluating e-Participation*, Institute for Information management Bremen, Bremen, Germany, 12 October.
- Macintosh, A., Malina, A. and Whyte, A. (2002) 'Designing e-participation in Scotland', *Communications*, Vol. 27, pp.261–278.
- Macpherson, C.B. (1977) *The Life and Times of Liberal Democracy*, Oxford University Press, London and New York.
- Organization for Economic Co-operation & Development (OECD) (2003a) 'Engaging citizens online for better policy-making', *Policy Brief*, OECD, Paris.
- Organization for Economic Co-operation & Development (OECD) (2003b) *The e-government Imperative*, OECD, Paris.
- Organization for Economic Co-operation & Development (OECD) (2004a) *Promise and Problems of e-Democracy: Challenges of Online Citizen Engagement*, OECD, Paris.
- Organization for Economic Co-operation & Development (OECD) (2004b) *Evaluating Public Participation in Policy Making*, OECD, Paris.

- Organization for Economic Co-operation & Development (OECD) (2001a) *Citizens as Partners – Information, Consultation and Public Participation in Policy-Making*, OECD, Paris.
- Organization for Economic Co-operation & Development (OECD) (2001b) 'Engaging citizens in policy-making: information, consultation and public participation', *Policy Brief*, OECD, Paris.
- Pateman, C. (1970) *Participation and Democratic Theory*, University Press, Cambridge.
- Petts, J. (1995) 'Waste management strategy development: a case study of community involvement and consensus building in Hampshire', *Journal of Environmental Planning and Management*, Vol. 38, No. 4, pp.519–536.
- Rose, J. and Sanford, C. (2007) 'Mapping eparticipation research: four central challenges', *Communications of the Association for Information Systems*, Vol. 20, pp.909–943.
- Rowe, G. and Frewer, L.J. (2000) 'Public participation methods: a framework for evaluation', *Science, Technology and Human Values*, Vol. 25, No. 1, pp.3–29.
- Rowe, G. and Frewer, L.J. (2004) 'Evaluating public-participation exercises: a research agenda', *Science, Technology and Human Values*, Vol. 29, No. 4, pp.512–557.
- Rowe, G., Marsch, R. and Frewer, L.J. (2004) 'Evaluation of a deliberative conference using validated criteria', *Science, Technology and Human Values*, Vol. 29, No. 1, pp.88–121.
- Saebo, O., Rose, J. and Flak, L.S. (2008) 'The shape of eparticipation: characterizing an emerging research area', *Government Information Quarterly*, Vol. 25, pp.400–428.
- Smithson, S. and Hirschheim, R. (1998) 'Analysing information systems evaluation: another look at an old problem', *European Journal of Information Systems*, Vol. 7, pp.158–174.
- Timmers, P. (2007) 'Agenda for e-democracy – an EU perspective', *European Commission*, Available at: http://ec.europa.eu/information_society/activities/egovernment/docs/pdf/agenda_for_edemocracy.pdf (last accessed 20/9/2008).
- Venkatesh, V., Morris, M.G., Davis, G.B. and Davis, F.D. (2003) 'User acceptance of information technology: Toward a unified view', *MIS Quarterly*, Vol. 27, No. 3, pp.425–478.
- Webler, T. (1995) 'Right discourse in citizen participation: An evaluative yardstick', in Renn, O., Webler, T. and Wiedermann, P. (Eds): *Fairness and Competence in Citizen Participation: Evaluating Models for Environmental Discourse*, Kluwer Academic, Dordrecht, The Netherlands.
- Whyte, A. and Macintosh, A. (2003) 'Analysis and evaluation of e-consultations', *e-Service Journal*, Vol. 2, No. 1, pp.9–34.