Explaining eDemocracy development: A quantitative empirical study

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Abstract. The term eDemocracy refers to the usage of information and communication technology in the democratic process. This usage can vary in form and extent. This paper distinguishes three types of explanations for this variation: explanations based on the suggestion of objective rationalisation, explanations based on political evaluation and discretion and explanations based on the assumption that technology itself is a driving force of institutional change.

Taking the case of eDemocracy development in Dutch municipalities, these three types of explanation are subjected to an empirical test. A quantitative analysis leads to the conclusion that the perspective of technology as driving force behind eDemocracy finds most support, and that the rationalisation perspective has some merits as well. There is no evidence, however, that differential political traditions play any significant role in the development of local eDemocracy in the Netherlands.

Keywords: Democracy, eDemocracy, government, ICT, political participation

1. Introduction

Electronic information and communication technologies (ICTs), such as email, the world wide web, cell phones and digital television are creating many new possibilities for communication between government and citizenry. This is most clear in the field of public service provision, but also in the context of political life and political communication [1–3]. In the latter field, four levels of potential ICT usage may be distinguished. First of all, new technologies can be used to inform the citizen. Via the internet, citizens may get access to governmental data and other information sources. They may learn about governmental programs, law and regulation and they may follow processes of political decision making in more detail than before (e.g. via on-line agenda's, on-line minutes and even live broadcasts of meetings). Second, ICTs may be used in the reverse way, to collect, regularly or ad hoc, information from the citizen. The internet may be regarded as an excellent instrument for opinion polling. As this technology provides opportunities to reach larger numbers of citizens in less time and at low costs, internet polls and on-line surveys are frequently used to get a quick impression of public opinion regards specific societal issues. Third, the new technology provides opportunities for on-line deliberation and discussion. Not only via email, but also via discussion lists and so-called on-line chats, political representatives as well as individual citizens may become more active participants in democratic debates. Finally, there is the possibility of electronic voting, where ICT's may be used in electronic referenda and on-line elections [3].

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Of course, these possible applications of ICT in the democratic process lead to a variety of questions concerning consequences and desirability. How will internet elections affect the secrecy of the vote [4]? What are the consequences of more frequent opinion polling on the nature of politics [5]? When all these opportunities develop, what will be the role of political parties [6]?

This paper, however, is about another question, namely that of explaining the empirical phenomenon of the actual use of ICT in the democratic process. As many questions about the possible consequences and the real desirability of ICT-use are still unanswered it is an empirical fact that so-called eDemocracy is already spreading. In many different countries and at many different levels of government we see experiments with and investments in the usage of information and communication technology in the democratic process. On the national level we see different national governments but also many political parties and national politicians who experiment with different ICT applications, but also within electoral districts and municipalities different forms of eDemocracy are explored to a greater or lesser extent.

Given these diverse developments in the broad field of eDemocracy, this paper focuses especially on the explanation of the developments initiated by government. Where it is clear that governments differ in the extent to which they introduce eDemocracy innovations, the research question is:

What explains the development of different forms of eDemocracy by different governments?

In order to answer this question, this article is organised as follows. First, the next section presents three different perspectives on the adoption of eDemocracy technologies and presents alternative sets of hypotheses related to these perspectives. Then Section 3 provides some information on the context in which these hypotheses are subjected to an empirical test: the usage of eDemocracy technology by municipalities in the Netherlands. Next, Section 4 elaborates on the research method used: the unit of analysis, the exact population that is investigated, the measurements and the statistical tests. The results of this investigation are presented in Section 5, immediately followed by a discussion in Section 6. Finally, in Section 7, some conclusions are drawn.

2. Explanations of eDemocracy development

In the context of democratic participation, the use of modern, computer-based, information and communication technology is more and more common. In many countries citizens are using the internet to search for information, to discuss fundamental issues and to vent their opinions. Meanwhile, many governments are investing in additional technological innovations to the democratic sphere. They try to build better websites, they experiment with on-line discussions and they try to develop reliable techniques for on-line referenda and internet voting. How can these developments be explained? In this section we present three perspectives from which possible explanations may be derived.

The first, and in a sense most practical perspective associated with technological innovation is that of rationalization and modernization. Since the early days of the enlightenment, modern society has been infused with the idea that knowledge collection and technological innovation will further societal progress. As new technologies provide alternatives and additions to existing ones, they seem to increase our opportunities to solve societal problems and to fulfil desirable aims more effectively and efficiently [7]. That this perspective may also be applied to information and communication technology and its promise for the public sphere is evident in view of many technology inspired policy discussions and policy papers. Even a superficial inspection of official eGovernment statements that have appeared over the years, results in numerous passages in which the rationalisation perspective is clearly present:

"Information and communication technology (ICT) provides a means by which public participation can be increased, and we hope that with an active government policy the potential benefits can be maximised. e-Democracy offers new ways of participating and seeks to complement rather than replace existing structures."
Robin Cook, Leader of the House of Commons and President of the Council, 2002 [8]
"The age of the internet also offers new forms of dialogue, communication and cooperation. State and administration must organise their dealings so that they do justice to the significance of the internet for the democratic process. This includes the possibility of voting via the internet as well as better and quicker access to administrative information."
Otto Schily, German Federal Minister of the Interior, 2001 [9]
"Informatie- en communicatietechnologie scheppen daarbij nieuwe mogelijkheden. Nader uitgewerkt betekent dit: verbetering van dienstverlening aan burgers en bedrijven; grotere betrokkenheid van burgers bij het openbaar bestuur en omgekeerd; betere toegankelijkheid en openbaarheid van overheidsinformatie [. . .]"[1]
Dutch Ministry of Internal Affairs and Kingdom Relations, 1995 [10]

Part and parcel of this rationalization perspective on ICT is the suggestion that current democratic practices are to some extent deficient and need to be modernised and that eDemocracy provides opportunities to address these needs. Thus, investments in eDemocracy are regarded as rational in view of apparent democratic deficits. There is talk about low citizen participation in political debate of decreasing levels of voter turnout and of a possible chasm between state and citizenry [3,10,11]. Furthermore, it is argued that especially the young and the higher educated can be reached via ICT's as they are used to these technologies and in a sense expect them to be used in the democratic process (Table 1). Thus, this rationalisation perspective, as it is often applied by politicians, provides a first type of explanation for the development of eDemocracy, namely: eDemocracy is developed as an answer to existing needs and opportunities.

Where in many government publications eDemocracy is presented as a promising development, with undeniable potential, many political scientists regard eDemocracy from a rather different perspective, namely that of eDemocracy as an expression of political will. The idea that eDemocracy is an objective necessity is considered flawed, since it is recognised that what is and what is not desirable in this respect, depends on beliefs, values and norms concerning what democracy is and should be.

As Van de Donk and Tops [1] and also Hoff et al. [2] argue, these beliefs, values and norms vary to a considerable extent and a variety of "democratic traditions" can be distinguished, with very different conceptions of democracy itself and of the roles therein of different actors. A most crucial issue in this political-science debate concerns the role of the individual citizen in the democratic process. On the one hand there are traditions, such as the so-called collectivist tradition, in which it is believed that democracy is better served by more direct citizen participation. On the other hand there are traditions – liberal and republican – which stress the need for well informed debate between elected representatives, who are endowed with special responsibilities and who may be in a better position to weigh different arguments.

Understandably, such differences in traditions have important implications for the way in which proposals for eDemocracy development are conceived and received [1,2,12]. The possibility of using

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[1]Translation by the authors: "Information and communication technology thereby creates new opportunities. Elaborated further, this means: improved service provision to citizens and companies; greater involvement of citizens in government and vice versa; better accessibility and publicity of government information [. . .]".

Table 1
Educational level and internet usage in the
Netherlands (2004)

Educational level	Internet usage
Elementary education	41%
Vocational training	42%
Lower secondary education	69%
Higher secondary education	71%
Higher education	85%

Source: Netherlands Central Bureau of Statistics 2004.

ICT's for on-line referenda is a well known example in this respect. In a country like Switzerland, such a development seems only a logical step that fits Swiss tradition perfectly [13]. In other countries, however, the same idea may be regarded as potentially disruptive. Hoff et al., for instance, refer to report by the Danish ministry of IT and research, which at the turn of the century states that "Online voting and opinion polls on the Internet [. . .] conflict with a number of fundamental features of Danish democracy" [14]. A similar position is also reflected in a report by the Washington-based Internet Policy Institute, which expresses its fears even more strongly: "E-voting in the long run could lead to referendums and threaten the deliberative nature of the political system and the protection of the minority" [5].

Following this line of reasoning, it suggested that differential developments in eDemocracy, both in form and in extent, can be explained from differential political steering, based on particular traditions and interests.

Finally, a third perspective on eDemocracy development contests the suggestion that this process is driven by objective needs or by political traditions and interests. As many studies concerning the application of technology have shown, technology, when it becomes available in a social context, will influence subsequent social dynamics [15–18]. The introduction of technologies and especially ICTs in a social context not only brings along the introduction of new artefacts (combinations of hardware and software) but also the involvement of specialized personnel (ICT-experts, ICT-managers) who bring with them particular beliefs, norms, values and interests. Typically, such new functionaries can be expected to have a more positive attitude towards the application of such technologies and to have specific understandings of what is rational, logical and proper to do with them. Moreover, as time passes, these functionaries and their interests become a motivational factor themselves as they and their departments may seek new challenges and new opportunities to improve their position.

This means that following the introduction of new technologies in an organisation, it becomes more likely that these technologies become used for other purposes than originally intended. In other words, subsequent steps in the digitization of an organisation may become 'technology driven'.

It is postulated here, that this explanation may also be applied to the adoption of eDemocracy technologies. As, over the last decades, we have witnessed the introduction of ICTs in government bureaucracies and in particular the use of the internet in electronic service provision, eDemocracy developments are likely to be technology driven. So: the increasing use of eDemocracy technologies may be explained from the current availability of this technology within government organizations and from the beliefs, values, norms and interests associated with them.

3. Hypotheses

The three perspectives discussed above all offer explanations for investments in different forms of eDemocracy by governments and can be used to formulate different hypotheses that may be subjected

to an empirical test.

First, as explained above, the opportunity for improvement perspective explains eDemocracy development as an attempt to change and enrich democratic practices in response to shortcomings of existing channels of democratic communication. In this respect, two shortcomings are generally mentioned: a) limited and decreasing voter turnout and b) changing citizen demand. Often, a connection is made between these shortcomings and a changing, higher-educated citizenry, which demands other channels for political communication. These insights may be expressed in two hypotheses:

H1a: The *extent* of eDemocracy development by governments is negatively related to the level of voter turnout in previous elections;

H1b: The *extent* of eDemocracy development by governments is positively related to the level of education of the citizenry.

The second, political-science perspective on eDemocracy concentrates on political will and political traditions. When it is assumed that differences in political will and political traditions express themselves in political party preferences, this perspective may be expressed in the following two hypotheses:

H2a: The *extent* of eDemocracy development by governments is related to the political colour of the dominant political party;

H2b: The *type* of eDemocracy applications provided by governments is related to the political colour of the dominant political party.

Finally, from the third perspective, which explains eDemocracy first and foremost as a development driven by the presence of the technology in government, a last hypothesis may be formulated:

H3: The *extent* of eDemocracy development by governments is positively related to the extent to which these governments are applying this technology for other purposes, electronic service delivery in particular.

The question that begs to be answered concerns the empirical validity of these different hypotheses. To what extent are they supported by empirical evidence and which explanations are most powerful? To answer this question the hypotheses were subjected to an empirical test in a context which will now be discussed: eDemocracy development in the Netherlands, on the level of the Dutch municipalities.

4. eDemocracy developments in Dutch municipalities

In most countries, municipalities form an important level of societal organization and of democratic government. This is particularly true for the Netherlands which defines itself as a so-called decentralised unitary state. It is an expression used to indicate that in the Netherlands, governmental power not only rests at the national level, but also and to a considerable extent at the level of the local and regional authorities: the Dutch municipalities and provinces. The autonomous position of the municipalities and provinces has been laid down in the Dutch constitution and their governing bodies are formed on the basis of independent democratic elections, which as a rule are held every four years.

Although, in general, national politics tends to draw more attention in the Netherlands, as it is the case in many other countries, the democratic process at the municipal level can be described as relatively important. It is generally acknowledged that local politics can play an important role in the lives of citizens, e.g. in terms of local order, in social assistance programmes, in the availability of housing and in city development. Moreover, it may be said that local politics in the Netherlands is rather lively, at least

Table 2
Forms of eDemocracy applied by Dutch municipalities, 2004
($N = 483$)

Type or eDemocracy application	Number of municipalities
Electronic newsletter	62
On-line publication of policy issues	32
On-line publication of activity index	15
On-line opinion polls	70
On-line survey	78
On-line chat	25
On-line forum	88

Source: National eGovernment monitor: advies.overheid.nl.

Table 3
Internet based eDemocracy implemented in Dutch municipalities

	N	Percent
Non adopters	300	62.6%
Electronic information providers	33	6.9%
Electronic opinion pollers	54	11.3%
Facilitators of electronic discussion	92	19.2%
Total	*479*	*100%*

when it comes to the number of political parties involved and the ensuing dynamics. It is not unusual to have ten or more political parties participating in the democratic contest at the local level.

It has to be admitted, however, that this importance and this liveliness of local politics is not always reflected in the level of enthusiasm among Dutch citizens in terms of voter turnout and other forms of political participation. As, in many other countries there is talk of a widening gap between politics and citizenry and a growing democratic deficit, which seems especially serious at the local level. Although turnout in national elections has declined during the last decades, it now seems to be regaining some ground to about 80 percent in recent more turbulent election years (2002, 2003). In local elections, however, turnout has always been lower and it has been decreasing more steadily over the last decades, from 68 and 73 percent in 1982 and 1986 to 58 and 59 percent in 2002 and 2006 [19].

Over the years, this decreasing involvement of citizens in local democracy has become an issue of serious concern and ways have been sought to invigorate local democracy. Various innovations have been proposed, such as the local referendum and the elected mayor and, with the advent of the internet in the nineteen-nineties, the potential of this new medium has been recognised as well. In line with the rationalisation perspective on eDemocracy, the Dutch national government was among the first to relate this new technology to the problematic of the growing democratic deficit at the local level [10]. In subsequent policy papers in the past ten years, the idea of implementing more eDemocracy technologies at the local level has been proposed more often. However, this has not led to any clear national policies, which of course is understandable, since the constitutional autonomy of municipalities in this field is to be respected.

Thus, the individual municipalities in the Netherlands have been free to experiment with eDemocracy as they liked and over the years this has resulted in many local initiatives. Quite a few municipalities have started to offer political information on their websites, some use the internet to conduct electronic opinion polls, and some have organised online debates and 'chats' with the cities aldermen. Table 2 provides some figures on the use of these forms of eDemocracy at the local level.

Many municipalities in the Netherlands use one or more forms of eDemocracy, but this usage varies to a considerable extent. This fact makes it an excellent context to test our hypotheses concerning the

explanation of eDemocracy development.

5. Method of research and measurements

This quantitative empirical study takes the municipality as the unit of analysis and focuses on the population of all Dutch municipalities, with the exception of the four larger cities ($N = 479$).[2] Further-more, it is decided not to take a sample from the population selected, but to investigate the population as a whole, using existing data, readily available from several sources. The concepts formulated in the hypotheses in Section 2 are operationalised as follows.

5.1. Dependent variables: extent and type of eDemocracy development

With respect to phenomenon to be explained, eDemocracy, the hypotheses distinguish two dependent variables: first the *extent* to which eDemocracy is developed and second the *type* of eDemocracy that is developed. Each municipality is scored on both variables, using the results of the eGovernment monitor: advies.overheid.nl (as presented on February 20, 2004). This monitor scores each municipal website on the availability of: electronic newsletters, overviews of policy themes and backgrounds, activities indexes, discussion platforms, chat functions, opinion polls and surveys.

Following the method of scoring in the monitor itself, the *extent* of eDemocracy is defined as the total score of a municipality on all these issues taken together (ranging from a minimum score of 0 to a maximum score of 98 points).

With respect to the *type* of eDemocracy, four categories are distinguished:

– Non-adopters (N.A.): municipalities that do not use any of the techniques;
– Electronic Information Providers (Inform): municipalities that only use the internet to provide their citizens with municipal information;
– Electronic Opinion Pollers (Poll): municipalities that (also) use the internet to acquire data from their citizens, via electronic polls and on-line surveys;
– Facilitators of Electronic Discussion (Discuss): municipalities that facilitate on-line discussion via platforms and chats.

5.2. Independent variables: voter turnout, education, political colour and electronic services

The four independent variables used to explain the variance in eDemocracy in extent and type are voter turnout, proportion of higher educated citizens, political tradition and extent of electronic service delivery.

Both *average voter turnout* during the last municipal elections and the *political colour* (measured as the political colour of the largest political party in the municipal council) are established using data from the municipal elections of 1998 and 2002, provided by the web archive of a Dutch national newspaper www.telegraaf.nl and by individual municipal websites (for special municipal elections held in between).

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[2]The main reason to exclude the four larger cities is that they are not really comparable with the other municipalities, as they are organized differently. Amsterdam and Rotterdam, for instance, are divided into boroughs, with their own borough-councils. Moreover, these larger cities are also clear outliers in terms of population size, as they are 20 to 40 times larger than the average Dutch municipality.

The *proportion* of citizens with a *higher educational background is* gathered from available data at the Netherlands' Central Bureau of Statistics.

The *extent of electronic service delivery* is determined, again, using the eGovernment monitor advies.overheid.nl. As this monitor looks at many different services and at the extent to which these services are provided on-line, each municipality is given a total-score, whereby it is important to note that scores on activities in the field of eDemocracy are excluded, this to avoid contamination between dependent and independent variables.

5.3. Analysis

To test the respective hypothesised relationships different statistical tests were applied depending on the measurement levels of the variables involved.

– For hypothesis H1a and H1b the correlation was tested between voter turnout and proportion highly educated, on the one hand, and the extent of eDemocracy on the other. In addition to this scatter plots were examined and additional forms of analysis were conducted to further explore possible relationships;
– For testing hypothesis H2a an analysis of variance was performed;
– For hypothesis H2b a Chi-square test was conducted;
– For hypotheses H3 the correlation was tested between the extent of on-line service delivery and the extent of eDemocracy.

All these tests were performed using SPSS version 12.01.

6. Results

The main results of the analysis described above are presented in Tables 3 to 7.

As shown in Table 3, the usage of eDemocracy technologies in Dutch municipalities is still rather limited. Less than 40 percent of all municipalities has implemented any eDemocracy technologies. However, in those municipalities that have, the rather advanced form of electronic discussion is most common. With respect to the explanation of differences between municipalities, the following findings are most relevant.

With regard to the hypotheses that represent the rationalisation perspective, 1a and 1b, Table 4 shows a small but nonetheless significant negative relationship between voter turnout and eDemocracy ($r = -0.15$). Further exploration of this relationship shows that especially municipalities with very low turnout (below 50 percent) use eDemocracy to a greater extent than municipalities with a higher level of turnout (Table 5). The hypothesised relationship between the proportion higher educated in a municipality and the extent of eDemocracy development is not supported.

The two hypotheses that explain eDemocracy as an expression of political will, hypotheses 2a and 2b, do not find any support. The analysis of variance does not show significant differences in the *extent* of eDemocracy between municipalities with different political ideologies (Table 6). Furthermore, the Chi-square test reveals no significant relationship between political colour and the *type* of eDemocracy implemented (Table 7).

Finally, with respect to hypothesis 3, which reflects the perspective that eDemocracy development is technology driven, Table 4 shows a larger and significant correlation between eDemocracy and electronic service delivery ($r = 0.52$). Thus, around 27 percent of the variation in eDemocracy is explained by the level of eGovernment sophistication.

Table 4
Correlations of eDemocracy with independent variables

	Turnout	Educ.	eServ.	eDem.	N	Mean	St. dev.
Turnout	–	-0.15^{**}	-0.13^{**}	-0.15^{**}	471	63.61	7.53
Prop. higher educated	-0.15^{**}	–	0.06	0.05	397	19.33	7.47
Electronic service delivery	-0.13^{**}	0.06	–	0.52^{**}	479	49.16	12.81
eDemocracy	-0.15^{**}	0.05	0.52^{**}	–	479	11.99	20.84

**Correlation is significant at the 0.01 level (2-tailed).

Table 5
Extent of eDemocracy and turnout

Turnout	N	Mean	st.dev
Below 50 percent	14	25.4	27.9
50 to 75 percent	438	11.8	20.6
Higher than 75 percent	27	8.9	19.7
Total	479	12.0	20.8

Analysis of variance: $F = 3.242$, sign $= 0.04$.

Table 6
Extent of eDemocracy and the political colour
of the largest party

Largest party	N	Mean	st.dev
Christian	128	11.84	21.47
Socialist/leftwing	47	10.77	18.64
Liberal	28	12.50	22.55
Local party	62	13.06	22.86
Other, unclear	214	11.98	20.25
Total	479	11.99	20.84

Analysis of variance: $F = 0.11$, significance
$= 0.95$.

Table 7
Type of eDemocracy and the political colour of the largest party

Largest party	Type of eDemocracy implemented				Total*
	N.A.	Inform	Poll	Discuss	
Christian	79	10	15	24	128
Socialist/leftwing	30	3	5	9	47
Liberal	19	2	1	6	28
Local party	38	6	4	14	62
Total	166	21	25	53	265

*Municipalities with a largest party with an unclear political orientation (The so-called liveable parties", $N = 5$) or without a clearly largest party ($n = 209$) have been excluded. Chi-square test: Chi-square $= 3.3$, significance $= 0.95$.

7. Discussion

Important differences exist in the extent to which Dutch Municipalities apply eDemocracy technology. In this investigation we find that these differences are explained to a limited extend by differential needs for innovation in different municipalities. Really low turnout is found to lead to increased investment in eDemocracy. The level of education of the population has no significant impact and neither has

the political composition of the municipal council. There exists, however, a clear positive relationship between eDemocracy development and the use of the internet in electronic service delivery.

Although this latter finding in itself may be regarded as not so surprising, the combination of findings is remarkable. The evidence suggests that, at least in the context of Dutch municipalities, alternative explanations for eDemocracy development find less empirical support.

Boldly stated, when Dutch municipalities use the internet to provide electronic service delivery they are likely to use the same technology to innovate local democracy as well, even if there is no real objective need and irrespective of political traditions. This finding strongly supports the perspective that eDemocracy development is driven to a large extent by technological innovation. The presence within a municipality of technological 'means' in terms of hardware, software, specialised personnel and formal ICT departments seems to promote eDemocracy development. Of course, this insight, derived from a first quantitative study, leads to further questions that beg to be answered.

The first question to be addressed here is whether these insights correspond to what is known about eDemocracy development in the Netherlands and whether they are corroborated by other facts. Of course, the idea that technology itself is a major force in eDemocracy development contradicts some of the insights given from other perspectives, which are supported by many politicians, government officials and political scientists in the Netherlands. However, at the level of the Dutch municipalities several observations may be made, which seem to corroborate the findings of this study.

With regard to the idea of eDemocracy is technology driven; it is evident that municipalities are under some pressure to innovate and to increase their use of information and communication technology and of the internet in particular. During the last decades, the Dutch national government has published many policy papers on this topic and although these were mostly about electronic services, the suggestion that the eDemocracy might be part of this was seldom avoided, to say the least. Furthermore, the connection of electronic service delivery and eDemocracy is most clearly present in the national monitor of electronic government which measures developments on the level of the Dutch municipalities. In line with earlier policy papers, this monitor starts from the assumption that every service that can be provided on-line eventually should be provided on-line. Thus, website sophistication is measured in terms of numbers of services and service levels, where more points are awarded for interactive services than for pure information services. As these points are counted together they lead to rankings, which suggest that those municipalities with the highest scores are the best performers in the information age. Because this monitor counts electronic opinion polling, digital discussions, on-line chats and similar applications as services too, municipalities may feel a pressure to develop these innovations, irrespective of any considerations of desirability at the local level. As is evident from other studies this pressure is also felt in municipal ICT departments [20]. These departments and their technical staff are expected to perform well on the monitor, and given this pressure, they are inclined to implement whatever this monitor measures. Thus, the suggestion that 'more is better' easily leads to proposals to provide more information on-line and to make the municipal website 'more interactive'.

Moreover, although it may be true that some politicians and political parties may be sceptical regards the deeper meanings of eDemocracy applications, it has to be said that this is not really evident from discussions in the Netherlands. Perhaps this is because the political science perspective is less relevant in the Netherlands, simply because differences between parties are less strong, than is sometimes assumed. Perhaps existing differences in tradition that do exist are not translated in effective political steering at the local level.

The second important question is to what extent the findings of this study may be generalised. Of course, answering this question requires further study, in other settings. It may very well be that in

the development of eDemocracy in other countries and/or at other levels of government other factors are more important. It is conceivable that the possible consequences of eDemocracy developments are taken more serious at the national level and therefore will be subject to more political guidance. It is also conceivable that in other countries awareness among local politicians regarding this issue is higher than in the Netherlands. Also, it is conceivable that in other countries eDemocracy development at the local level receives stronger guidance from the state level. However, notwithstanding these reservations, it is evident that similar forms of pressure to apply more technology in the democratic process, can be witnessed elsewhere. Many countries use similar eGovernment monitors as the Netherlands and the idea that ICT's should be used to provide more information and to become more interactive seems omnipresent. Also, in a recent comparative study on international developments in on-line voting, signs of technological drive in the field of eDemocracy were uncovered. In many countries, initiatives for the introduction of on-line voting do not so much sprout from concerns of democratic institution building, but rather from ICT companies and from eGovernment and eSociety programmes, which many countries have developed in the nineteen-nineties to stimulate *technological* innovation and to prepare national economies for the information age [21].

8. Conclusion

Over the last few decades eDemocracy has been a topic of discussion. Many politicians have argued in favour of new forms of eDemocracy, while many political scientists have discussed the deeper meanings of ICT for the democratic process. In the mean time, however, eDemocracy is becoming an empirical fact. Political information is provided via websites, governments use the internet to conduct surveys, there are electronic polls and on-line chats. This study has compared three explanations for this development in the context of municipalities in the Netherlands.

There is some indication that the use of eDemocracy is inspired by efforts of rationalisation and modernization of the democratic process. Especially in municipalities where turnout has been very low, there is more investment in eDemocracy. Although the political science literature expresses concerns about some forms of eDemocracy, there is no sign of deliberate political steering by political parties.

The perspective that the application of ICT in the democratic process is technology driven, however, finds most support. When municipalities seriously address electronic service delivery and invest in ICT, this seems to spill-over in eDemocracy, even at a time when it is still unclear whether this new development is really desired.

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