

# EXPECTATIONS THAT RUN HIGH DUTCH CITIZENS ON E-GOVERNMENT

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## Abstract

*The Dutch government wants to improve its maturity in e-government. Therefore, it is important to identify the opinion of the e-government most important target group: the citizens themselves. In a repeated survey among Dutch citizens in 2001 (N=700) and 2004 (N=1200), respondents were extensively questioned about the electronic products and services of governmental organizations. The aims are: 1) describing the level of and changes in expectations of Dutch citizens on e-government in 2001 and 2004 and 2) explaining the variations in e-government expectation between citizens. Although both surveys differ in their research design and respondent composition, they provide the opportunity to measure the actual expectations on e-government. From multivariate analysis it can be concluded that e-government expectation of citizens is related to ICT skills on the one hand, and political attitude on the other. In addition, analyses show that these factors drive e-government expectations independent of background characteristics such as age, gender and education. This implies that public agencies deal with e-government expectations that, indeed, run high and will increase further in the future.*

*Keywords: e-government, The Netherlands, citizen consultation, Participatory Policy Analysis.*

## 1 INTRODUCTION

Whereas the e-business hype may have died down, the growing expectations about e-government seem to become the new issue on the ICT-agenda. Many polls and surveys in Europe depict e-government as an emerging trend with remarkable consistency (Baker et al., 2004; "E-government", 2004; Leitner, 2003). In public organizations, both 'producers' and 'consumers' plea for a fast deployment of ICT to improve the quality and efficiency of governmental products and services (cf. Prins, 2001). In addition, this movement is encouraged by the central government itself. As innovation and ICT are loudly advocated as the main drivers of the modern Western economies, public representatives realize that this also applies to their own apparatus. Governmental organizations however, traditionally process large amounts of information of a sensitive nature. The application of IT to such processes is constantly and critically determined by security and control procedures. This might be the reason that new developments in ICT diffuse relatively slow in most public

organizations. On the other hand, this implies that there are relatively large opportunities to improve public services and that it is attractive to contribute and achieve 'quick wins' in this area.

E-government is listed high on both the political and research agenda (cf. the UNPAN reports and other UN or EU publications). The goals of e-government often are formulated in terms of the modern management vocabulary. Governmental organizations need to be transformed to customer-oriented and process-driven systems supported by integrative information architectures. At the customer (i.e. citizens) side, Customer Relationship Management (CRM or: e-CRM), mass customization and client empowerment need to be realized. At the supply side, governmental bodies are expected to turn into extended enterprises, orchestrating value networks with other suppliers of public information and services. Out of this transformation, it is claimed, a flexible and innovative type of government is reckoned to be finally appearing. These organizations will be much better able to perform public tasks to the satisfaction of all (and changing) target groups. In short, customer satisfaction for citizens, reduced red tape for businesses and efficiency gains and reduced costs for government should be some of the resultant benefits - to name only the measurable ones.

With the introduction of these terms and concepts into a relatively conservative and inert environment, expectations move easily beyond reality. Quality of service provision might be improving, as well as the willingness to create a 'transparent government'. Still, much paperwork is conducted over the counter and the relationship between public authorities and citizens is marked by criticism and scepticism. Given that the road to this ideal situation is strewn with obstacles (though fortunately with opportunities, too), this provides ample need to ascertain whether promises are really being turned into reality, and what further gaps are still remaining towards the premises of e-government. In other words, monitoring instruments to measure the expectations on (and achievements of) e-government are highly relevant to keep track with the fast moving developments in this area.

This paper reports the results of two research projects in the Netherlands that were designed and executed in 2001 and 2004 with these aim to monitor the expectations of Dutch citizens on e-government.

The aims of this paper are to:

- describe and compare the levels of expectations of Dutch citizens on e-government in 2001 and 2004;
- explain the variations in e-government expectation between citizens.

To do so, we first define what is meant by e-government in this paper. This section also addresses the question why it is important to involve citizens in this research into e-government. After that, in the next section we elaborate on theoretical insights about determinants of individual expectations about both the Dutch government and ICT-usage in general. After presenting the descriptive and explanatory analysis, the results will be translated into recommendations for the potential Dutch e-government. We conclude the paper by discussing how monitoring expectations can contribute to customer segmentation and the goal-oriented diffusion of e-government in public organizations.

## 2 DEFINING E-GOVERNMENT AND THE ROLE OF CITIZENS

Within the Dutch context, according to Holland et al. (2002: 7-8) e-government "*means that when a government organization, for the conduct of its public tasks - and, beyond them, its operational processes, services and interaction with citizens and businesses - uses ICT, combining the new media with the old media. It thus relates to internal operational processes, external service provision and the supply of information by government organizations via open and/or closed electronic networks.*" In this definition the connection between government organizations and its clients (citizens and businesses) plays a central role. This implies that e-government measurements also need to be

customer-oriented. If customer satisfaction is defined as the final representation of the much debated gap between citizen-government – and e-government aims to contribute to its closing – ‘ordinary’ inhabitants should be the main target group for evaluation and monitoring studies. In recent years however, we have witnessed a strong growth in e-government surveys that emphasize the supply side of e-government. These studies typically take the organizational structure of public bodies (i.e. their current provision of products, services and technologies) as a starting point. International benchmarks on e-government for instance, count the number of electronic public services and products in each country (Ronaghan, 2002; Schware, 2003). Different countries are extensively compared on these measurements that are clearly inspired by macro-economic indicators such as number of on-line citizens, number of on-line services, and the like. Contrary to these studies, we focus on the demand side of e-government by collecting data directly from citizens. This makes it harder to deliver quick scans and fast figures on e-government, but improves the quality of the survey information.

Our study takes into account the expectations of target groups explicitly. From standard evaluation theory we use the insight that measurement of a certain policy or intervention effect should be related to the initial expectation of the effect by the stakeholders involved (cf. Weiss, 1998). With e-government, there is no guarantee that expectations of citizens resemble those of policymakers. So to make e-government a success, policymakers should firstly address the expectations, demands and opinions citizens have on e-government. This insight will improve the fit between the technological investments of policymakers on the one hand, and expectations of citizens on the other hand. Especially if information about ‘tacit variables’ like attitude and expectations is concerned, direct consultation of citizens is required. Examples of questions are: How do citizens perceive electronic communication with their government? What are citizens’ experiences with electronic service delivery? Which aspects of electronic service delivery do citizens consider to be important in electronic service delivery? Under what conditions will citizens make use of electronic service delivery? Which products and services do citizens prefer to handle electronically? Answers to these kinds of questions measure citizens’ expectations on e-government, i.e. electronic contact and communications with government agencies.

### **3 ATTITUDES TOWARDS ICT AND POLITICS AS EXPLAINING FACTORS**

What do Dutch citizens expect of e-government? If we want to understand the variations in expectations among citizens and the changes in trends over the years (our aims)– or why certain citizens think e-government is really ‘at work’ while others believe that it is nearly ‘in progress’ – we need to debunk the mechanisms behind these expectations. To construct a conceptual model with this aim, we draw upon insights from different disciplines. The basic idea is that citizens’ expectations on e-government are driven by two factors: (1) the citizens’ attitude towards ICT (experience and usage level) and (2) the political attitude of citizens, i.e. his or her general interest in politics, governments and public bodies.

With respect to the first factor (ICT attitude) it is important to notify that in a short period of time, the number of government agencies that offer electronic services has increased. Also, electronic public services have become more advanced and integrated. For instance, it is not only possible to retrieve policy information, citizens can also complete governmental forms electronically and deliver them. In addition, the Dutch citizen has become ICT-experienced as well. Quite prominent, the number and proportion of Dutch households with access to the Internet and other advanced ICT tools (broadband internet, cell phones, wireless home networks, etc.) is one of the highest in the world (OECD, 2004). In a short period of time, the number of people that actively use the Internet and develop digital skills has strongly increased. Citizen expectations of the online experience are not static. Over the years individual expectations and behaviour are likely to change with regard to ICT, because of the experience individuals gain. We identify experience with and the level of usage of ICT as important factors. The more experience an individual has with a particular technology; the more likely it is that

that an individual will use it (Fulk, Schmitz and Steinfield, 1990; Venkatesh and Davis, 2000, 2003). 'Mastery experience' is also the most influential determinant of self-efficacy (Bandura, 1986). It can be expected that the overall expectations of e-government increase over the years as people get more aware of the possibilities and experience what is possible with ICT in other fields, such as e-business and e-commerce. E-commerce and e-business satisfaction scores for example have shown gradual upward trends over the past years (American Customer Satisfaction Index, 2004). As a result of the increased experience not only changes are expected in general trends of expectations on e-government of society as a whole. But also individual differences are to be expected. People with certain demographic characteristics will lag behind. These demographic variables can be related to the determinants of the diffusion of internet-use in society (cf. Rogers, 1995). Hence, it is hypothesized that expectations on e-government are also positively correlated with education, occupational status and negatively with age.

In concrete, the hypothesis can be derived that expectations with regard to e-government are positive correlated with the level and frequency of a persons' internet use (user experience) on the one hand, and demographic characteristics on the other.

With respect to the second factor (attitudes towards politics), we need to take a political science or public administration perspective to determine the citizens' political attitude. Similar to the previous hypothesis, a large domain of theories are applicable to this general theme. Of specific use for our research problem is the recent approach of Participatory Policy Analysis (PPA). Originally paraphrased by DeLeon (1993) and Durning (1993), PPA was developed in several contexts as an innovative method to involve 'ordinary people, stakeholders, citizens, and laymen' directly into the process of policy development and planning (Mayer, 1997). This line of PPA-research demonstrates that the political motivated citizens have a relatively high level of education, are often female and older. When invited to be involved into consensus conferences, scenario workshops, policy debates or game-driven policy workshops, determinants as age, gender and educational level play an important role in self-selection and participation (Mayer, 1997; Roelofs, 2000; Bongers, 2000). Applied to the issue of e-government, this leads to the hypothesis that citizens' that have high expectations about e-government are closely connected to those that see opportunities in participatory policy involvement. These citizens generally have confidence in governmental plans and activities, and taking part of these 'public decision rooms'. In relation to background characteristics, gender, age and level of education are important determinants of this political attitude.

Putting the hypothesis of both factors together, our basic claim is that ICT attitude and political attitude are the two direct drivers of citizens' expectations on e-government, and their socio-demographic characteristics (like age, gender, education and household situation) have an indirect relationship with the dependent variable. In other words, ICT attitude and political attitude are expected to determine e-government expectations, especially if we control for background characteristics. This constellation of hypothesis and assumptions can be visualized in a conceptual model as follows (Figure 1).

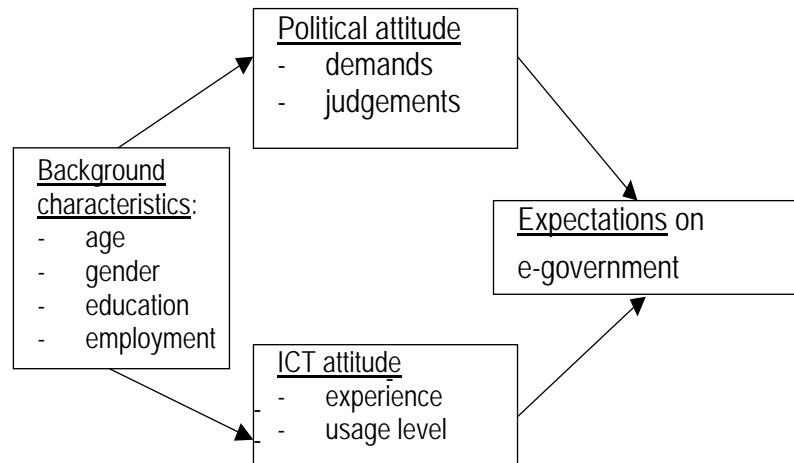


Figure 1. A conceptual model to determine citizens' expectations on e-government

#### 4 DATA AND MEASUREMENTS

The data we use in this paper originate from two waves of citizen consultations (i.e. surveys) that were initiated and financed by the Dutch Ministry of the Interior in 2001 (Dialogic, 2001) and 2004 (Dialogic, 2004). In both years the respondents were extensively questioned about the electronic products and services of governmental organizations. It was aimed to attain a representative response from the Dutch population. In 2001, about 4,000 households were randomly selected from the Dutch white pages. One month after sending the questionnaire by posted mail, 707 questionnaires were returned which equals a 17.7% response rate. Given the fact that the mailing was done during the bust month of December (2000), this response rate can still be considered as satisfactory. The response rate is in line with other e-government consultations, for example 14.3% in the third Canadian Citizen First consultation (Erin Research, 2003).

In May 2004 the second consultation was executed. In order to reduce deficiencies with regard to representation of the sample in 2001 we opted to engage a panel of TNS NIPO, containing 1,230 Dutch citizens. Although because of that, the research design differed somewhat from the first measurement, we argue that this was important, in order to make future comparisons. Since the research aims at identifying wishes and expectations from a group of respondents that is representative for the (adult) Dutch society, the research population was considered to be all Dutch citizens of 16 years or older (12,450,000 people). We drew a sample from the panel aiming to achieve a representative distribution of households with and without an Internet connection at home (around 2003, 60% of the Dutch households has an Internet connection at home (Otten, 2004)). Households of both categories were sent an equal number of questionnaires (1,200 to 1,300) as can be expected that the response non-Internet connect households was relatively low. From the net sample of households with an internet connection at home, 710 responses were reached. From the non-internet households 184 households responded. This can be explained by the topic of the study (government and ICT) whereas Internet users might be extra motivated to fill in surveys on this topic. Consequently, the proportion households with an Internet connection at home is 75% in our sample, which is above the 60% as the official population figure from Statistics Netherlands research. Despite the somewhat deviating design, large parts of the questionnaire remained comparable with the first survey. The main differences with regard to the background characteristics of both response groups are presented in Table 1.

	Survey in 2001 (%)	Survey in 2004 (%)	Difference between 2001 and 2004	
			Chi-Square test (p) <sup>a</sup>	T-test (p) <sup>b</sup>
Gender				
Male	74.5	50.7		.000
Female	25.5	49.5		
Age				
< 20	0.6	0.9	.014	
20-34	21.7	21.6		
35-49	34.0	27.6		
50-64	26.5	27.5		
> 64	17.3	22.4		
Level of Education				
Low	3.7	9.9	.000	
Secondary	21.2	29.3		
Higher	27.5	33.3		
College	47.6	27.6		
Respondent is employed				
No	35.2	51.2		.000
Yes	64.8	48.8		
Respondent is living alone				
No	22.3	17.5		.009
Yes	77.7	82.5		
Internet/email experience				
Not	30.3	15.2	.000	
Less than 1 year	11.3	5.9		
Between 1 and 2 years	18.8	3.7		
Between 2 and 3 years	16.5	10.4		
More than 3 years	23.1	64.7		
Frequency of Internet/email use				
(almost) Never	45.4	76.1	.000	
Monthly	19.2	9.6		
Weekly	2.3	1.1		
Daily	33.1	13.3		
Number of respondents	701	1,225		

<sup>a</sup> P-value based on 2-sided Pearson Chi-Square test.

<sup>b</sup> P-value based on 2-tailed Equality of Means test (equal variance assumed).

*Table 1. Variable description: respondents' background characteristics in 2001 and 2004; significance of difference*

The overview shows that participants of the 2004-survey significantly differ from the respondents in 2001 with regard to almost all of the selected background characteristics. Due to the different source and sampling technique, respondents in 2004 are closely distributed according to the Dutch population. This is in contrast to the 2001-response group, where men, middle aged, higher educated and employed are clearly overrepresented. Both groups also differ substantially with respect to Internet/email experience and use. This growth over three years strongly indicates the increasing impact of these media-technologies in Dutch society, because the sample in 2004 is clearly less selective with respect to the common Internet and email users than in 2001.

In the next sections, we will present the results of analysis for both data sets simultaneously. In interpreting descriptive statistics we should strongly take into account the presented differences in composition of the respondents.

## 5 RESULTS

Central in both surveys and this paper are the expectations of Dutch citizens on e-government. There are several Likert-items presented in the questionnaire to grasp the measurement of this theme. The answers to these items (mean and standard deviations) are presented in the next table. We performed T-tests to establish the difference between 2001 and 2004, taking the notion about the comparability of both response groups into account. More important, we conducted scale analysis (Chronbach's alpha) to ascertain the potential aggregation of this item list to one factor, being the dependent variable for out next steps of analysis. In Table 2 the items are ranked according to their highest score in 2001 and 2004.

Item <sup>a</sup>	Survey in 2001 (mean)	Survey in 2004 (mean)	Difference between 2001 and 2004 T-test (p) <sup>b</sup>
E-government can decrease waiting time	<b>3.89</b>	3.60	.000
E-government can increase expertise to help citizens	<b>3.37</b>	3.04	.000
E-government can increase chances to meet citizens requests	<b>3.03</b>	2.97	.284
E-government can improve guarantee of citizens privacy	<b>2.62</b>	2.52	.056
E-government can reduce costs of services and products	<b>3.89</b>	3.74	.004
E-government can customize services like automatic pre-completed forms	<b>3.83</b>	3.79	.419
E-government can improve personal contact with public bodies	<b>2.78</b>	2.61	.005
E-government can contribute to a respectable services	2.80	<b>3.07</b>	.000
E-government can increase access public services "7x24"	4.05	<b>4.18</b>	.004
E-government can improve process monitoring of request	3.54	<b>3.74</b>	.001
E-government should send me yearly overviews of their personal data	3.74	<b>3.98</b>	.000
Internet will decrease the gap between policy and citizens	3.46	<b>3.60</b>	.013
Chronbach's Alpha over all 12 Likert items	.79	.86	

<sup>a</sup> Answer categories of all Likert items were coded according to its common 5-point scale: 1=fully disagree, 2=disagree, 3=neutral, 4=agree, 5=fully agree.

<sup>b</sup> P-value based on 2-tailed Equality of Means test (equal variance assumed).

*Table 2. Item analysis: respondents' expectations about e-government in 2001 and 2004; significance of difference*

In general, Dutch citizens are quite optimistic in their expectation on e-government. Both in 2001 and 2004, most items are agreed upon. Expectations that e-government will improve 'respectable services', 'citizens' requests', 'citizens' privacy and 'personal contact' are somewhat lower but not judged as fully unrealistic given that the presented means are closer to the 'neutral' than the 'disagree' category. Comparing 2001 and 2004 resulted into many significant differences according to the conducted t-tests, but it is very difficult to interpret a particular pattern in this. Some items were judged with higher expectations in 2004, while other items were answered more positively in 2001. It

should be recognized that these differences might also be hard to understand because of the respondent differences between 2001 and 2004. Finally, the Chronbach's Alpha scores over the complete item list prove a convincing scale consistency in 2001 and 2004 (.79 and .86). This means that we can aggregate the 12 items for both data sets and construct a reliable common factor, indicating the expectation level of Dutch citizens on e-government. In practice, we created this new variable based on a linear addition of items, with their regression coefficients (factor loads) as weights. E-government expectation as the central dependent variables for 2001 and 2004 appeared to have fairly normal distributions, which make them suitable for further bivariate and multivariate analyses.

The next step in our analysis concerns the description of the independent variables within our integrative model. Gender, age, level of education, employment and household situation were described as background characteristics in Table 1. The two variables experience with Internet/email, and frequency of Internet/email use (see Table 1 as well), are multiplied to operationalize the respondents' ICT skills (both correlate around .80 in both data sets). With regard to the respondents' opinions about government and public bodies in general, some extra variable construction is conducted. In the Table 3, we present the ranked scores of the items adopted in the questionnaire to indicate political attitude.

Item <sup>a</sup>	Survey in 2001 Mean	Survey in 2004 Mean	Difference between 2001 and 2004 T-test (p) <sup>b</sup>
Dutch governmental organizations do better than private organizations	<b>3.51</b>	2.78	.000
The Dutch government is cautious with privacy information	<b>3.36</b>	3.33	.515
The government supplies enough information about rights and obligations	2.87	<b>2.91</b>	.389
It is easy to find service and information of Dutch governmental organizations	2.69	<b>4.03</b>	.000
Chronbach's alpha over all 4 Likert items	.29	.39	

<sup>a</sup> Answer categories of all Likert items were coded according to its common 5-point scale: 1=fully disagree, 2=disagree, 3=neutral, 4=agree, 5=fully agree .

<sup>b</sup> P-value based on 2-tailed Equality of Means test (equal variance assumed).

*Table 3. Item analysis: respondents' opinion about the Dutch government, 2001 and 2004; significance of difference*

Table 3 demonstrates that in general the Dutch government is judged 'moderate positive'. Respondents are not very positive on the information the Dutch government provides with respect to rights and obligations, but they do think that the government is cautious with handling privacy information. There is a remarkable difference between 2001 and 2004 with regard to the question if information and service is easy to find, much in favour of the current government. The provocative question about the relative 'performance' of governmental organizations is also answered quite positively although the 2004-score is lower compared to 2001. If we inspect the Chronbach's alphas for both data sets it must be concluded that the four items do not converge towards one common factor (.29 and .39 are too low to indicate a reliable scale). When inspecting the correlations between the four items, it appears that in 2001 the 'performance'-item does not fit the other three items, while in 2004 the 'privacy'-item reduces the scalability of the total item set. It was decided to construct a political attitude scale using the first three items from Table 3 in 2001, and to construct a similar scale containing the first and last two items from Table 3 for the 2004 data set. In both cases the same construction tool was used to realize the scale of e-government expectations.

After presenting and constructing the dependent and independent variables, we execute the actual testing of our hypothesis. As a metric dependent variable, the respondents' expectations on e-government are distributed normally which makes application of the observed least squares (OLS) regression model appropriate. Five background characteristics were added to the OLS-model independent variables (gender, age, level of education, employment and household situation) and both constructed variables ICT skills and political attitude. The independent variables were checked on their intercorrelations, but no potential problems of multi-collinearity were indicated. Table 4 presents the results.

Predictor	Survey in 2001		Survey in 2004	
	Beta <sup>a</sup>	P <sup>b</sup>	Beta <sup>a</sup>	P <sup>b</sup>
Gender <sup>c</sup>	-.022	.458	.044	.387
Age	-.086	.131	.002	.969
Education <sup>d</sup>	-.001	.989	-.061	.219
Employed <sup>e</sup>	.003	.962	-.016	.745
Living alone <sup>e</sup>	-.095	.040	-.059	.222
ICT skills	.331	.000	.323	.000
Political attitude	.056	.217	.314	.000
Adjusted R-Square	.12		.20	
N	432		370	

<sup>a</sup> Standardized regression coefficient.

<sup>b</sup> P-value based on t-value.

<sup>c</sup> Male=1, female=2.

<sup>d</sup> Low=1, 2=Secondary, 3=Higher, 4=College.

<sup>e</sup> No=0, yes=1.

*Table 4. Regression analysis: respondents' expectations on e-government in 2001 and 2004 predicted by gender, age, educational level, employment and household situation, Internet/email experience, general opinion about the Dutch government*

For both years, the regression coefficients of the independent variables are rather similar except from one: in 2001 the political attitude of respondents does not have an any direct effect on e-government expectation whereas in 2004 this variables does matter significantly. Most robust is the positive effect of ICT skills. In both data sets, it appears that having and using the general abilities to use Internet and email directly determines the respondents' expectation to use these channels for interaction with governmental organizations. From this result we can conclude that citizens want to communicate with the governmental organizations electronically and digitally if they already do this in private or working life on a frequent basis. This confirms the assumption that confidence with certain media (e.g. Internet and email) extends into a positive attitude to apply this to different goals and several domains.

Remarkably, the background characteristics gender, age, education, employment and household situation (living alone or not) do not have any direct significant effects on citizens e-government expectations. Apparently, their potential effect on e-government expectations is 'passed through' the ICT skills and political attitude of citizens. In the next section we elaborate on the policy implications of these results.

## 6 CONCLUSION AND IMPLICATIONS

This paper aimed to describe and explain the (variations of) expectations of Dutch citizens on e-government. This aim is in line with the ambition of the Dutch government to monitor its maturity in this field and make severe progress. Therefore, it is important to identify the opinion of the e-

government most important target group: the citizens' themselves. For this paper we used data collected from a repeated survey among citizens in the Netherlands in 2001 and 2004. In both years the respondents were extensively questioned about the electronic products and services of governmental organizations. Although both surveys differ in their research design and respondent composition, both provide the opportunity to measure the actual expectations on e-government, as well as to test several hypothesis on the determinants of these expectations.

From variable description and multivariate analysis a number of results can be summarized. Not surprisingly, Dutch citizens have clearly become more ICT skilled between 2001 and 2004 (taken the fact into account that both surveys' design particularly deviate on this variable). One might expect that the expectations on e-government of the Dutch haven risen at the same pace, but we observed that the general expectations are on the same 'serious' level in both 2001 and 2004. Advantageous for developing a valid instrument to monitor e-government expectations, we found that a list of 12 Likert-items form a reliable scale indicated by high Chronbach alphas. Still, respondents in 2001 and 2004 do differ with respect to their type of expectations. For example, decreasing waiting time and costs was expected more in 2001, whereas in providing '7x24' service and personalized data was expected more in 2004.

Following two different perspectives, we expected that e-government expectations of citizens are related to their ICT skills on the one hand and political attitude on the other. The potential effect of ICT skills is based on the idea that expectations on e-government are driven by general confidence and motivation towards Internet and email as promising media. The relevance of political attitude is expected to determine the specific motivation to interact and communicate with governmental organizations in order to be heard as critical citizens. Both ICT skills and political attitude were measured by several indicators and then regressed on the constructed scale of e-government expectations in 2001 and 2004. It can be concluded from the 2001 and 2004 data set that the relationship between ICT skills and e-government expectations is stable and strongly positive. Political attitude appears to be of direct relevance in 2004 only. In addition, the OLS regression analyses showed that the significant effects of ICT skills and political attitude are independent from background variables as gender, age, education, employment and household situation.

Towards policy makers and the Dutch government these results have important implications. First, the fact that expectations of citizens are moderate or high in both 2001 and 2004 implies that public bodies deal with constant pressure to improve its on e-government maturity. Second, it can be expected that Dutch citizens will increasingly exercise their critical attitude towards governmental organizations and as well develop their ICT skills. This will drive e-government expectations in general. Subsequently, governmental agencies should recognize that ICT skills and political attitude correlate with background as age and education. Our data confirm the results of much research that Internet and email skills differ systematically between men and women, young and old, employed and unemployed and so on. Consequently, governments and public bodies need to adjust their e-government activities to different 'target groups'. Hence, governmental organizations might also anticipate to the idea of customer segmentation in developing and executing e-government.

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