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The Relationship between Political Factors and the Development of E–Participatory Government

Isabel-María García-Sánchez, Luis Rodríguez-Domínguez, and Isabel Gallego-Álvarez

Department of Business Studies, University of Salamanca, Salamanca, Spain

This article examines the determinants of the development of the e–participatory government in 189 countries selected by the United Nations for the e-Government Survey 2008. It examines the effect that the political system—features of the ruling party, interparty competition, voters, and interest groups—has on the development of e–participatory government. The authors' analysis indicates that given that politicians have the most say in the development of e–participatory government, and at the same time they are the ones most averse to its development, except for those with a conservative ideology, the style of administration and the pressure exerted by interest groups are the key factors for the development of e–participatory government.

Citizens are nowadays demanding more accountability and transparency from public bodies and more opportunities for direct input on public issues that affect them (Scott 2006). Also, the complexities of policy decisions and program delivery sometimes motivate public agencies to seek more citizen involvement. Furthermore, with declining budgets, there is financial pressure to increase the efficiency of government (Tolbert and Mossberger 2006). Within this context, e-government has been proposed as a solution for increasing citizen communication with public administration agencies (Chadwick and May 2003; Kumar and Best 2006), given the potential of the Internet to enhance civic participation (Bakardjieva 2009).

According to Grant and Chau (2005, 3), the definitions of e-government abound in the literature and some "focus on ICTs, particularly the Internet, to deliver more efficient and effective government services, while others view e-government as a broad-based effort to transform government and governance." These differences are understandable because e-government is an evolving phenomenon and therefore difficult to pin down.

Riley (2001) identified three stages in the development of e-government: e-government (when the government starts having a presence on the Internet), e-governance (when the government starts providing services over the Internet), and e-democracy (when we start seeing active citizen participation).

Mossberger, Tolbert, and Stansbury (2003) call the last two stages the entrepreneurial and the participatory approach. In a later article Tolbert and Mossberger (2006, 357) explain that the entrepreneurial approach "provides a flexible and convenient interface with government customers, who can access government around the clock and experience 'one-stop shopping' for information and services"; the participatory approach "allows citizens to become more knowledgeable about government and political issues, and the interactivity of the medium allows for new forms of communication with elected officials and between citizens—through chat rooms, listservs, e-mail, and bulletin board systems."

The development of e-government has been studied by several disciplines, including information systems, marketing, psychology and sociology, and public administration. Owing to our specialization, this research is mainly situated within the public administration approach to e-government.

Within the public administration literature, empirical studies of e-government initially focused on the level of development in public websites (i.e., West 2000, 2001, 2002, 2003, 2004; Caba, López, and Rodríguez 2005; Torres, Pina, and Royo 2005; Torres, Pina, and Acerete

2006), and the format, volume and quality of the budgetary and financial information disclosed (i.e., Laswad, Fisher, and Oyelere 2005; Cárcaba and García 2008). Currently, empirical studies are focusing on factors associated with the development of the entrepreneurial approach of e-government. These studies mainly use the quantity and quality of financial and budgetary information disclosed and the stages of service development as the dependent variable. They do not focus on the initiatives taken by the public administration to foster citizens' participation online, such as a consultation process (i.e., Siau and Long 2006; Kim 2007; Pina, Torres, and Royo 2007b; Tolbert, Mossberger, and McNeal 2008; Gandía and Archidona 2008; Caba, Rodríguez, and López 2008).

In contrast to previous studies, this work examines the determinants of the development of the e–participatory government in 189 countries selected by the United Nations for the e-Government Survey 2008, by focusing in particular on political factors and the style of public administration, because most earlier works were based on demographic and socioeconomic drivers.

E–participatory government is becoming an independent area of interest in its own right since the technological infrastructure has enabled many new projects designed to support active citizenship (Sœbø, Rose, and Flak 2008, Jensen, Danzinger, and Venkatesh 2007). In previous research Mahrer and Krimmer (2005) have observed that politicians very actively oppose e–participatory government, because (1) they believe that they are much more qualified than the ordinary citizen to make political decisions and (2) the concepts of e-democracy are threatening to the individual politician. Given that politicians have the most say in the development of e–participatory government and at the same time they are the ones most averse to its development, it is not a surprise that the United Nations (UN 2008) report found that little progress had been made in the development of e–participatory government. This report shows that a total of 189 countries are online and a greater number of them are in the middle to top one-third in e-participation use; 82 percent of the countries surveyed still remain in the lower one third. To put it another way, few countries have implemented e-participation policies since the last time the index was calculated in 2005. In effect, the United Nations (UN 2008) report shows only a slight development of this type of e-government. It only confirms the results of previous studies. For instance, the Organization for Economic Co-operation and Development (OECD) study showed that the use of the Internet in the public sector had failed to facilitate public participation in policymaking (cited in Norris 2001).

If the role of politicians is indeed ambivalent, what other political forces can advance the development of e-participatory government? To answer this question, this study examines the political system as a whole, focusing on factors such as features of the ruling party, inter-party competition, and constituents (voters and interest groups) that could have a bearing on the development of e–participatory government.

The following section provides an overview of the evolution of e-government and the recent empirical studies, and introduces the analytical framework for the study. Thereafter the empirical analysis is presented and the results are discussed. The last section summarizes the most important conclusions.

RESEARCH MODEL FOR THE ADOPTION OF E-PARTICIPATORY-GOVERNMENT

Very few e-government proposals survive the stage of formal political decision making to become substantive e-government projects. Furthermore, the implementation of e–participatory government projects is undertaken at a much slower pace and with dramatically less support than the implementation of other, so-called e-administration activities in the public sector (Mahrer and Krimmer 2005).

According to Buchanan's (1954) public choice theory, politicians' behavior is oriented to satisfying their own interests and, latterly, to achieving social welfare. Nevertheless, Buchanan recognizes some limits to this political activity, as the goods and funds managed are public in nature. Citizens—as owners of these resources—have mechanisms to monitor politicians' decisions and the power to vote them out in future elections. Therefore, politicians make decisions based on the exchange relationships, as explained later.

This theory provides a framework for analyzing the complex political environment in which voters, interest groups and politicians interact to shape the decisions about adoption of particular policies, in general, overall (Mueller 1979, 1989), and e-government practices, specifically. Politicians are the main actors in the decision making about the future evolution of e-government. They are appointed through an electoral process and always act to maximize the number of votes they obtain in the next election. To do so, they deploy a given amount of time and resources to shape policies to serve voters, in exchange for votes, and interest groups, in exchange for resources, insofar as these can be reinvested to affect electoral outcomes (Bavetta and Padovano 2000). Thus, politicians need to satisfy voters' and interest groups' demands in order to ensure their reelection.

Thus, the ideological makeup of the ruling party and the political stability necessary to implement the innovations proposed in an electoral program can significantly affect the development of e–participatory government. The other factors include political competition and the potential benefits stemming from an e-transparent administration (Tolbert, Mossberger, and McNeal 2008). Table 1

TABLE 1
Selected current research papers on the determinants of e-government development

Authors	Scope	Methodology	Variables	Results
Siau and Long (2006)	191 countries	Kruskal-Wallis tests	*Dependent variable:* United Nations Index of e-government 2003 *Independent variables:* Income level (high, medium, low); Development status (underdeveloped, developing, developed); Region NDP classification	All the variables representing the level of wealth of the countries are significant.
Kim (2007)	163 countries	Multivariate regression	*Dependent variable:* West (2004) measurement of e-government performance *Independent variables:* Internet users per 1,000 inhabitants; Adult literacy rate; Gross domestic product per capita; Government effectiveness; Civil liberties; Urbanization; Research and development expenditures/gross domestic product	All of the variables, except *Internet users per 1,000 inhabitants* and *research and development expenditures/gross domestic product* have a direct relationship with e-government performance.
Pina, Torres, and Acerete (2007)	Central government of United States, Canada, Australia, New Zealand, and 15 European countries	Multivariate regression	*Dependent variable:* Sum of 77 items about financial accountability *Independent variables:* Internet penetration; E-commerce; Contact with public access technology for Internet connectivity; Internet access costs; Security; Expenditure on information and communication technologies; Central e-government; Human capital index; Technology infrastructure index	Only *Internet penetration* has a significant positive effect on state online accountability.
Gandía and Archidona (2008)	130 Spanish municipalities	Multivariate regression	*Dependent variable:* Sum of 88 items about content, presentation of financial and budgetary information, and navigation *Independent variables:* Political competition; Municipal wealth; Municipal leverage; Public media visibility; Adult literacy rate; Percentage of households with computers and Internet access; Population	The variables *political competition*, p*ublic media visibility,* and *population* are directly related to municipal financial transparency.
Caba, Rodríguez, and López (2008)	65 Spanish municipalities	Multivariate regression	*Dependent variable:* Financial information contents, characteristics, and accessibility *Independent variables:* Political competition; Municipal debt; State and regional funds; Municipal fiscal pressure; Educational level of voters; Population; Percentage of households with computers and Internet access	Only *percentage of households with computers and Internet access* has a significant positive effect on the disclosure index.

(Continues on next page)

TABLE 1
Selected current research papers on the determinants of e-government development *(Continued)*

Authors	Scope	Methodology	Variables	Results
Tolbert, Mossberger, and McNeal (2008)	50 US states	Multivariate regression	*Dependent variable:* West (2004)'s measurement of e-government performance *Independent variables:* Institutional capacity; Total state revenues per capita; State environment of policy innovation; Percentage of households with computers and Internet access; Political participation; State diversity; Democrat ideology; Party competition	The variables *Institutional capacity*, *state environment of policy innovation* and *political participation* have a significant positive effect on the dependent variable. Conversely, *total state revenues per capita*, *percentage of households with computers and Internet access*, *state diversity and democrat ideology* have a significant negative effect.

summarizes some selected research papers on the determinants of e-government development, which will be commented subsequently.

Ideology and Stability

The ideology of the ruling party can have an impact—either positive or negative—on e-government. The few studies that have analyzed this issue have found a positive influence of the Socialist Party in Spain (Cárcaba and García 2008), the center-left political orientation in Italy (Medaglia 2007), and the Republican Party in the United States (Tolbert et al. 2008).

According to several authors, governments with a right-wing ideology tend to carry out major economic and public-sector reforms that facilitate the development of e–participatory government. Government with other types of ideologies, however, tend to concentrate on social policies (Ni and Bretschneider 2007; García Sánchez and Prado Lorenzo 2008, 2009). When analyzing electronic democracy in California, Weare, Musso, and Hale (1999) found that a liberal political ideology does not appreciably increase the probability of adoption of measures to develop e–participatory government. Nonetheless, there is not enough empirical research to have a clear idea on which political proclivity may be more positively inclined to the development of e-participatory government. Thus, given the mixed evidence, we have formulated the following hypothesis:

> H1: There is a relationship between the conservative political tendency of the ruling party and the development of e–participatory government.

To test the proposed hypothesis we use a dummy variable as an independent variable, CONSERVATIVE. This variable takes the value 1 if the governing party shows a conservative ideology and 0, otherwise. This information is obtained from the CIA's World Factbook (2007).

At the same time, a greater or lesser level of political stability may lead to the advancement of or a halt in the activities related to e–participatory government, because the implementation of these measures tends to require political support for assignment of adequate resources, whose payoff will become apparent only in the medium to long term. Accordingly, we formulated the following hypothesis:

> H2: There is a positive relationship between the political stability of the ruling party and the degree of development of e–participatory government.

We developed the variables ELECTION, COALITION, and STABILITY to test this hypothesis. The variable ELECTION represents percentage of votes achieved by the ruling political party in the last presidential elections. The variable COALITION is a dummy that takes the value 1 if the ruling political party is governing in coalition with other political parties and 0 otherwise. Given that this variable takes value 1 when the governing party has relatively weaker power, we expect a negative relationship with e-participatory government development. These variables were obtained from CIA's World Factbook (2007).

Finally, STABILITY is based on the index devised by Kaufmann, Kraay, and Mastruzzi (2008) for the World Bank. It measures perceptions about the likelihood that the current government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism. Appendix A describes the items considered.

Political Competition

Smith and Fridkin (2008) argue that interparty competition plays a key role in the decision of politicians to devolve institutional power to citizens. That requires closer communication with the constituents, which in turn facilitates the development of e–participatory government. In general a

high degree of political rivalry can create a favorable environment for technological reforms (Tolbert, Mossberger, and McNeal 2008), given the heightened monitoring of public administration in such situations.

Previous research, however, has shown mixed results concerning this fact. On the one hand, Cárcaba and García (2008), Gandía and Archidona (2008), and Tolbert, Mossberger, and McNeal (2008) underscore the positive influence of political rivalry on the use of digital government; on the other hand, Laswad, Fisher, and Oyelere (2005) conclude that it is not a statistically significant factor for New Zealand municipalities.

In accordance with these theoretical arguments, we have formulated the following hypothesis:

H3: The level of political competition positively influences the development of e–participatory government.

To test this hypothesis we use the variable PARTIES measured by the number of political parties taking part in the latest general elections that have obtained representation, in line with previous papers (e.g., Gandía and Archidona 2008). In this sense, and in relation to other potential factors that could be employed to represent political rivalry, this variable measures the political competition and the fragmentation of the electoral support. Moreover, it identifies that in several countries like Spain and France, national parties need to associate with minority parties in order to rule owing to the D'Hondt's system used to allocate seats in parliaments. This variable is obtained from CIA's World Factbook (2007).

Voter and interest groups. Voters and interest groups, respectively, control votes and resources and therefore they can influence the policy implementation decisions of the political leadership (Bavetta and Padovano 2000), including those related to e-government. Traditionally, socioeconomic variables are used as proxies for these actors, given that a higher economic and educational status usually leads to a higher participation and voting rates; in addition, as society increases in population and urbanization, diverse organizations develop to represent their interests (Cheng 1992). Within this perspective, previous works that have analyzed the influence of economic wealth (e.g. Laswad, Fisher, and Oyelere 2005; Siau and Long 2006; Kim 2007; Tolbert, Mossberger, and McNeal 2008) have usually found a positive association between the level of wealth and the use of e-government.

Level of education is also an essential factor in the election participation rates and in the use of e-government by citizens. To access and use the Internet, individuals require computer-related skills, as well as the ability to search, use, interpret, and assess information (Mossberger, Tolbert, and Gilbert 2004; Kim 2007). Furthermore, a well-educated and trained population will demand a higher volume of information from public administrations (Tolbert, Mossberger, and McNeal 2008). On this point, Norris (2005) detects a positive impact of education on political activism through the Internet.

Although a significant influence of education was not found at the early stages of e-government adoption (McNeal, Tolbert, Mossberger, and Dotterweich 2003), most recent studies have confirmed its importance (Norris 2005; Kim 2007; Gandía and Archidona 2008; Tolbert, Mossberger and McNeal 2008). Accordingly, we have formulated the following hypothesis:

H4: Voters positively influence the development of e–participatory government.

We use variables GDP and ADULTLITERACY to test hypothesis H4. To reflect economic wealth we use the national statistics variable gross domestic product per capita (GDP) for 2007, obtained from CIA's World Factbook (2007). ADULTLITERACY is a numerical variable formed by the adult literacy rate obtained from the United Nations Human Capital Index 2007.

With regard to interest groups, population can be used as a proxy of their number. A number of studies have tested whether the largest cities provide more opportunities for public involvement through the Internet and have more advanced e-government practices (Carrizales 2008; Medaglia 2007; Weare, Musso, and Hale 1999; Scott 2006). Understandably, large cities will be motivated to adopt e-government as a tool to manage the practical challenges and the high costs of communicating effectively with different agents and public bodies (Justice, Melitski, and Smith 2006). Accordingly, we formulated the hypothesis:

H5: Interest groups positively influence the development of e-participatory government.

The level of urbanization shows a close relationship with the existence of interest groups and telecommunications infrastructures (Tolbert, Mossberger, and McNeal 2008), because urban areas tend to provide better facilities and services for Internet usage, compared to rural areas, with a larger prevalence of agricultural activities (Kim 2007).

To check this, we use the variables POPULATION and AGRICULTURE. The first one reflects the number of inhabitants in each country, taken from CIA's World Factbook (2007). The second one is a dummy variable that takes the value 1 if agriculture is the most predominant sector of the business activity in each country and 0 otherwise. This variable indicates the proportion of the population in rural areas, so we expect a negative relationship with e-participatory government development. The data were also obtained from CIA's World Factbook (2007).

OTHER FACTORS

To avoid biased results in our analysis, we controlled for a set of factors that may have a significant influence on the development of e-participatory government (e.g., Gallego Álvarez, García Sánchez, and Rodríguez Domínguez 2008). According to previous empirical research, these drivers mainly have to do with the level of Internet usage and the style of public administration.

Internet Usage

With regard to technological development, an essential driver for the development of e-participatory government is the extent of Internet usage. The more people with access to the Internet, the more possible it is to use web platforms for enhancing the administration-citizen relationship (Tolbert, Mossberger, and McNeal 2008). The effect of technological development is analyzed through the variable INTERNET, the ratio of Internet users per 100 inhabitants obtained from the United Nations Telecommunication Infrastructure Index of 2007.

Style of Public Administration

The style of public administration is one of the most influential factors in public management innovation processes. The control variables that identify the style of public administration are specified as follows:

- *Administration culture.* According to Allen, Juillet, Paquet, and Roy (2001), necessary changes in public government can be blocked by an administration culture that is badly adapted to the digital world. Rodríguez, Caba, and López (2005), Pina, Torres, and Acerete (2007), and Pina, Torres, and Royo (2007b) have underscored the strong influence of administration culture on the development of e–government as a reporting tool. As a proxy for the administrative culture, we used the variable OECD, an organization that promotes e-governance and citizen participation (OECD 2003). OECD takes the value 1 if the country belongs to the OECD and 0 otherwise.
- *Civil liberties.* Participatory e-government is based on citizens' right to declare their opinions, demand fulfilment of their needs, and participate in the decision-making process. Furthermore, expansion of civil liberties contributes to increasing the interactions between citizens and governments (Kamarck 2004; Kim 2007). As a proxy for the degree of civil liberties in each country, we have used the variable VOICE, the index developed by Kaufman, Kraay, and Mastruzzi (2008) for the

World Bank. This variable measures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as the freedom of expression, freedom of association, and a free media. Its composition can be seen in appendix B.

- *Control of corruption.* Schuppan (2009) observed that high corruption in a country is a negative factor for the development of e-government. In this vein, countries with the lowest levels of corruption will be more transparent in the disclosure of information about the management of public funds and vice versa (Pina, Torres, and Royo 2007b), encouraging citizens' participation in the political process. The proxy for the level of corruption in a country will be Transparency International's CPI (Corruption Perceptions Indicator) Score of 2007, which indicates the degree of public sector corruption as perceived by business people and country analysts, and ranges from 10 (highly clean) and 0 (highly corrupt). This variable will carry the name CORRUPTION.

RESEARCH MODEL

Starting with the variables selected to check the hypotheses proposed, we have defined the following model 1, in which the level of development of e-participatory government depends on a set of political factors, the Internet usage, and the style of public administration:

$$\text{E}-\text{participatory government} = f(\text{Internet, Style}$$
$$\text{of Public Administration, Political Factors}) \quad (1)$$

Model 1 can be estimated empirically from model 2:

$$\text{E-PARTICIPATORY-GOVERNMENT}_i = \beta_0$$
$$+ \beta_i \text{INTERNET}_i + \sum_{i=1}^{3} \partial_i SPA_i + \sum_{i=1}^{9} \Omega_i PF_i + \varepsilon \quad (2)$$

in which INTERNET$_i$ are the control variables for identifying the Internet penetration rate of each country, SPA_i are the control variables which reflect the style of public administration, and PF_i are the independent variables which represent political factors.

Our reference dates were 2007 for the dependent, independent, and control variables, which determine the level achieved in the dependent variable. Model 2 has been tested empirically through a Tobit regression, owing to the structure of the dependent variable. The results of the analysis are given in the following section.

E-PARTICIPATORY GOVERNMENT

The level of development of e–participatory government in different countries worldwide is obtained from the e-Participation Index 2008, edited by the United Nations in 2008 and compiled in 2007.

E–participatory government has the potential to establish more transparency in government by allowing citizens to use new channels of influence, thus reducing barriers to public participation in policymaking. For e–participatory government to be successful and to become the norm, governments need to create an environment that allows citizens to voice their views online and, more importantly, to create a feedback mechanism that shows citizens that their views are being taken seriously. This requires trust between citizens and their governments, as well as a robust infrastructure that allows citizens access to decision makers. How a country can access and realize this potential is measured in the e-participation index.

To create the index, in total, twenty-one citizens' informative and participatory services and facilities were assessed across 189 countries, in instances in which these services and facilities were online and where data were available. Questions were grouped under three categories: e-information, e-consultation, and e–decision making. Each country was assessed on a scale of 0–4. The index was constructed by standardizing the scores using the methodology of the World Wide Web Consortium's (W3C) Web Accessibility Initiative (available at http://www.w3.org/WAI). The items analyzed in the United Nations study and used in this paper are synthesized in appendix C.

- *E-information*. The government Web site offers information on the list of elected officials, government structure, policies and programmes, points of contact, budget, laws and regulations, and other information of public interest. Information is disseminated through a number of online tools such as: community networks, blogs, Web forums, text messages (microdemocracy), news-groups, and e-mail lists. Table 2 provides a synthesis of the frequency of countries providing e-information.
- *E-consultation*. The government Web site provides the tools necessary for e-consultation. It allows citizens to set the agenda for debate through e-petitioning. The government ensures that its elected officials have a Web site to communicate directly with their constituents. It maintains an archive of their discussions and provides feedback to citizens. Table 3 provides a synthesis of the quality and relevance of e-consultation.
- *E–decision making*. The government is willing to take into account the e-inputs of citizens in the decision-making process. The government informs its citizens on what decisions have been taken based on the consultation process. Table 4 synthesizes the frequency of countries providing e–decision making.

In effect, the index summarizes the relevance of initiatives in e-government, in both the disclosure of information and the possibilities of consultation with officials, and the decisions made after consultations with citizens. Given that the three stages are usually progressive, the index is well suited to measure the degree of development of e-government practices, from a lower level of use of Web sites and political involvement toward the highest level of civic engagement through the Internet.

In table 5, the quality and relevance of e-participatory government for a set of selected countries are shown. The United States scored the highest on the e-participation index. This was primarily due to its strength in e-information and e-consultation, which enables citizens to be more interactive with their government. It was closely followed by South Korea, which performed extremely well in the e-consultation assessment. Denmark and France were tied for third place.

Most countries received higher scores on the e-information assessment than on the e-consultation and

TABLE 2
Countries providing e-information

Items	Frequency	
	Absolute	Relative (%)
Government provides a clear and explicit written e-participation policy or mission	37	19
E-mail alerts for e-participation purposes	21	11
RSS used to update and involve citizens	20	10
Written calendar listing of upcoming online participation activities	21	11

Source: Adapted from Department of Economic and Social Affairs, Division for Public Administration and Development Management, *United Nations e-Government Survey 2008* (New York: United Nations, 2008), http://unpan1.un.org/intradoc/groups/public/documents/un/pan028607.pdf, table 5.4.

TABLE 3
Quality and relevance of e-consultation

	Frequency	
Items	Absolute	Relative (%)
Use of polls to solicit citizen opinion	32	17
Use of chat/instant messaging to solicit citizen opinion	10	5
Use of weblogs (blogs) to solicit citizen opinion	8	4
An open web forum for discussing any topic	26	14
An open online discussion forum specifically for policy issues	23	12
The contents of past discussions in an online forum is posted	22	11
Formal online consultation process offering a structured way for citizens to comment on government laws or policy	21	11
Non-formal online consultation mechanism asking for citizen feedback on policies and activities	18	9

Source: Adapted from Department of Economic and Social Affairs, Division for Public Administration and Development Management, *United Nations e-Government Survey 2008* (New York: United Nations, 2008), http://unpan1.un.org/intradoc/groups/public/documents/un/pan028607.pdf, table 5.4.

e-decision-making assessments. The survey also shows that 164 countries have received scores on the e-information assessment, which indicates that most governments have started the process of communicating with their citizens through electronic means.

RESULTS OF THE EMPIRICAL ANALYSIS

We first discuss previous descriptive analysis and then examine the results of multivariate analysis.

Previous Descriptive Analysis

In table 6, the correlations between the variables proposed are shown. The variable INTERNET shows the highest correlation coefficient (0.634) with the dependent variable, after the variables CORRUPTION (0.609) and OECD (0.542) .

From these findings, it is apparent that the level of technological development of a country and the style of public administration will be the most significant drivers of citizen participation through the Internet.

Moreover, this matrix reveals that there are no high correlations between independent and control variables, which can lead to multicollinearity problems. Likewise, the use of the STATA statistical package permits removal of those variables that can cause such a problem when the model is run.

Multivariate Analysis Results

The findings obtained for the estimation of the dependency Model 2 based on a Tobit regression are summarized in table 7.

TABLE 4
E–decision making

	Frequency	
Items	Absolute	Relative (%)
Government commits itself, formally or informally, to incorporating the results of e-participation into e–decision making	22	11
Explicit acknowledgment of received e-opinions, e-deliberations, and e-interactions	18	9
Government sends a "sent receipt" to citizens after receiving input, including a copy of what was received, by whom, date and time received, and estimated response time	12	6
Officials moderate e-deliberations online	6	3
Government publishes findings and results of citizen opinions, including e-opinions, on Web site	23	12

Source: Adapted from Department of Economic and Social Affairs, Division for Public Administration and Development Management, *United Nations e-Government Survey 2008* (New York: United Nations, 2008), http://unpan1.un.org/intradoc/groups/public/documents/un/pan028607.pdf, table 5.4.

TABLE 5
Quality and relevance of e-participation initiative

Country	E-information	E-consultation	E–decision making	Total
United States	93.33	100.00	75.00	89.80
Republic of Korea	93.33	77.78	93.75	87.76
Denmark	80.00	83.33	87.50	83.67
France	86.67	77.78	87.50	83.67
Australia	100.00	61.11	81.25	79.59
New Zealand	53.33	100.00	56.25	71.43
Mexico	60.00	88.89	50.00	67.35
Estonia	73.33	66.67	56.25	65.31
Sweden	60.00	50.00	68.75	59.18
Singapore	66.67	83.33	18.75	57.14
Ukraine	53.33	61.11	37.50	51.02
Jordan	20.00	61.11	62.50	48.98
Vietnam	33.33	44.44	62.50	46.94
Bhutan	20.00	44.44	68.75	44.90
China	46.67	27.78	56.25	42.86
Argentina	66.67	44.44	12.50	40.82
Brazil	40.00	33.33	50.00	40.82
Colombia	73.33	22.22	25.00	38.78
Mozambique	46.67	38.89	31.25	38.78
Honduras	20.00	22.22	31.25	24.49
Mongolia	20.00	22.22	31.25	24.49
Philippines	33.33	11.11	31.25	24.49
BurkinaFaso	13.33	22.22	18.75	18.37
Hungary	20.00	16.67	18.75	18.37
Iraq	13.33	22.22	18.75	18.37
Libyan	13.33	16.67	25.00	18.37
CapeVerde	20.00	11.11	12.50	14.29
Germany	40.00	5.56	0.00	14.29
SaintKittsandNevis	20.00	11.11	12.50	14.29
Bangladesh	13.33	11.11	12.50	12.24
Barbados	20.00	0.00	18.75	12.24
Croatia	26.67	5.56	6.25	12.24

Source: Adapted from Department of Economic and Social Affairs, Division for Public Administration and Development Management, *United Nations e-Government Survey 2008* (New York: United Nations, 2008), http://unpan1.un.org/intradoc/groups/public/documents/un/pan028607.pdf, table 5.4.

Seven variables, with four independent—CONSERVATIVE, ELECTION, POPULATION, and AGRICULTURE—and three control variables—INTERNET, VOICE, and CORRUPTION—turned out to be statistically significant for confidence levels of 95 percent. All of them have a positive effect on the development of e–participatory government, except for AGRICULTURE, ELECTION, and VOICE, which have a negative influence. The independent variables identify three of the five hypotheses proposed in the current study.

The variables OECD, ADULTLITERACY, STABILITY, and PARTIES show a positive effect, while COALITION has a negative impact. Nevertheless, none of these variables has a statistically relevant influence on the development of e–participatory government.

As for the control variables that are statistically significant, we have verified that the level of technological development (INTERNET) and the control of corruption (CORRUPTION) favorably influence the implementation of e–participatory government. However, a high level of civil liberty negatively affects its evolution, whereas the OECD variable lacks significant impact.

Our findings concerning the influence of the first control variable affirm that a higher level of e–participatory government development is strongly linked to countries with high technological development. These results are

TABLE 6
Correlations matrix

	E-PARTI	POPUL	GDP	ADULT	INTERN	CORRU	AGRIC	OECD	PARTI	ELECTION	COALI	CONSERV	STABIL	VOICE
E-PARTICIPAT	1.000													
POPULATION	0.1384	1.000												
GDP	0.2466	0.0514	1.000											
ADULTLITERACY	0.3733	-0.0137	0.3340	1.000										
INTERNET	0.6335	-0.0540	0.4278	0.5931	1.000									
CORRUPTION	0.6092	-0.0509	0.4654	0.5330	0.8647	1.000								
AGRICULTURE	-0.2035	-0.0537	-0.1175	-0.3642	-0.2055	-0.2147	1.000							
OECD	0.5419	-0.0121	0.4733	0.3986	0.7162	0.7097	-0.1123	1.000						
PARTIES	0.1365	0.2373	-0.0542	-0.0635	0.0854	0.1135	-0.0466	0.1390	1.000					
ELECTION	-0.3257	-0.0455	-0.0886	-0.1525	-0.3774	-0.2966	-0.0728	-0.2441	-0.2061	1.000				
COALITION	0.0748	-0.0044	0.0344	0.0638	0.1235	0.0966	-0.0533	0.1768	0.2157	-0.1061	1.000			
CONSERVATIVE	0.3890	-0.0040	0.3992	0.2463	0.4312	0.4494	-0.1029	0.5181	0.0942	-0.1654	0.2823	1.000		
STABILITY	0.3819	-0.1337	0.3817	0.5322	0.6293	0.7455	-0.1856	0.4606	-0.1161	-0.1542	-0.0312	0.3237	1.000	
VOICE	0.3579	-0.0894	0.3749	0.4514	0.6591	0.7336	-0.1769	0.5656	0.2273	-0.2751	0.1305	0.4312	0.6790	1.000

TABLE 7
Tobit regression results, with dependent variable: e–participatory government

Variable	Hypothesis	Sign	Coefficient	SE	T
INTERNET	—	–	0.0032652	0.0014545	2.24**
OECD	—	–	0.0789128	0.0568521	1.39
VOICE	—	–	–0.0558983	0.0241101	–2.32**
CORRUPTION	—	–	0.0364895	0.0167542	2.18**
CONSERVATIVE	H1	?	0.0954366	0.0465875	2.05**
STABILITY	H2	+	0.001968	0.0259274	0.08
ELECTION	H2	+	–0.0014048	0.0007325	–1.92**
COALITION	H2	–	–0.0531532	0.067673	–0.79
PARTIES	H3	+	0.0031571	0.0055818	0.57
GDP	H4	+	–0.0000767	0.0000616	–1.25
LITERACY	H4	+	0.0002199	0.0009043	0.24
POPULATION	H5	+	0.0000000215	0.0000000101	2.13**
AGRICULTURE	H5	–	–0.174164	0.0839495	–2.07**
Intercept			0.0104003	0.1048838	0.10
Chi squared = 104.34***					
Log-likelihood = 31.271901					

Note. Significance indicated by ***p < .01; **p < .05.

consistent with the Pina, Torres, and Royo (2007b) study on European regions and municipalities.

The divergence of results with regard to the insignificant impact detected by Pina, Torres, and Royo (2007a) and Gandía and Archidona (2008) and the negative effect observed by Tolbert, Mossberger, and McNeal (2008) can perhaps be explained both by the typology of e-government analyzed and by the study's context. While this study analyzes a diversified sample, other works have focused on municipalities or states belonging to the same geographical context, which usually evidence a similar evolution in Internet usage as a consequence of a national policy which favors its development.

With regard to the control variables related to the style of public administration, all the variables remain significant, except for the OECD. Therefore, our findings emphasize the importance of civil liberties and the control of corruption in the implementation of e–participatory government.

With regard to OECD, some authors (e.g. Rodríguez, Caba, and López 2005; Pina, Torres, and Royo 2007a; Pina, Torres, and Acerete 2007) have analyzed the relationship between a citizen-oriented administration culture and website usage as mechanisms for reporting in European municipalities. The findings obtained in this study do not permit the generalization of such results in the development of a national e–participatory government in spite of several attempts promoted by the OECD, through diverse activities and agencies such as PUMA, to foster new public management.

In this sense, we have found that the development of e-government is linked to more ethical administration, but inversely associated with a greater recognition of citizen's rights. Along this line, several authors, such as Schuppan (2009) and Maumbe, Owei, and Alexander (2008), have observed that e-government development may run contrary to countries' real situations because of the tendency of some countries to import the online practices of developed countries without having the necessary background.

Concerning the independent variables proposed, the variable CONSERVATIVE, which reflects the conservative ideology of the governing party, exhibits a direct relationship with e–participatory government. Consequently, hypothesis H1 can be accepted, indicating that there is a potential influence of political ideology on the development of e–participatory government development and also that right-wing parties are currently encouraging the involvement of citizens in political issues through online processes. These findings, consistent with those obtained by Tolbert, Mossberger, and McNeal (2008) for the development of e–entrepreneurial government in North America, may suggest that parties with a right-wing ideology tend to introduce public-sector reforms relating to e-government in general. However, our finding is contrary to that found of Medagli (2007) and Cárcaba and García (2008) in countries that have an overall low level of adoption of advanced participatory features.

The variable ELECTION—which represents the political stability of the current government in relation to the

support obtained in the previous general elections—has a negative influence on the development digital government. In addition, the two other variables proposed to test the effect of political stability on the development of e–participatory government—COALITION and STABILITY—turn out not to be significant. These latter findings, jointly with the inverse relationship obtained for the variable ELECTION, lead us to reject hypothesis H2, because political stability is not a political factor that promotes the technological development of the national administration and can even hinder it. Initially, it can be thought that less political stability can involve more interest in alternatives, giving rise to greater willingness to take chances by introducing new technologies; however, our findings are not conclusive enough.

More specifically, we have observed that the implementation of online participation mechanisms for citizens is negatively affected by the existence of governments that have obtained an absolute majority in the ballot boxes. However, a coalition government and a stable political environment may not significantly affect its development.

The positive effect of POPULATION and the negative effect of AGRICULTURE allow us to accept hypothesis H5 relating to interest group pressure on legislative bodies in order to promote e–participatory government. In addition, our findings for population are in line with previous studies that analyze the critical factors in an electronic democracy, such as Carrizales (2008) and Weare, Musso and Hale (1999); however, our results are different from those obtained by Scott (2006) in U.S. municipalities, where the sites of medium-sized cities provided more opportunities for public involvement than the sites of small or large cities.

In contrast, neither voters nor interparty competition promotes the evolution of e-government, so hypotheses H3 and H4 are rejected, given that the independent variables selected to test them are not significant.

Theoretically, high political competition creates a favorable environment for technological reforms. Thus, there may be a continuous monitoring of public management, which may benefit from the use of new technologies oriented to reporting information for the interested public. At the same time, it could be a useful mechanism for the governing party to show the positive side of its management, with greater accessibility and lower costs. The nonsignificance of our results confirms the findings obtained for the e–entrepreneurial government by Laswad, Fisher, and Oyelere (2005), Cárcaba and García (2008), Gandía and Archidona (2008), and Tolbert, Mossberger, and McNeal (2008).

Our findings related to the role played by the economic wealth of a country and its citizens' education in the development of e–participatory government are opposed to those of Norris (2005), Kim (2007), and Tolbert, Mossberger, and McNeal (2008). This could be a consequence

of the typology of e-government considered. Hence voters play a special role in e–entrepreneurial government but not in e–participatory government.

DISCUSSION OF THE RESULTS

In relation to our main research hypothesis, we have found that, considered overall, political systems have a significant effect on e–participatory government development. More specifically, the existence of a high number of interest groups and the conservative ideology of the ruling party notably foster the evolution of this kind of e-government. On the contrary, political stability—in relation to the percentage of votes obtained in the last general elections—negatively influences its evolution.

These findings confirm the public choice theory claim that decisions about the evolution of e-government involve a trade-off between the real desires of politicians and the requirements of interest groups. Politicians are the main drivers of the evolution of e-participatory government but they also often explicitly and implicitly oppose it (Mahrer and Krimmer 2005). In this sense, the pressures exerted by interest groups can play an important role in influencing politicians to overcome their initial reluctance. This pressure may be even more effective in those countries where the governing party did not achieve strong support in the ballot boxes. In some way, the search for legitimacy and the formal compliance with the wishes and expectations of the external environment and stakeholders are behind the adoption of citizen participation initiatives. This situation can imply a higher need for satisfying the interests of individuals who may support that political party in future electoral campaigns, in order to ensure its reelection with a higher percentage of votes.

These results may also indicate that political stability is not an essential factor for the development of participatory mechanisms for e–participatory government. Having an absolute majority may allow the ruling party to forget citizens' needs, by not being motivated to remain cued in to their opinions or suggestions.

The absence of a statistically significant influence for voters could be explained by the fact that they make up unorganized groups with less information and they only influence political decisions by casting votes in elections (Bavetta and Padovano 2000). On the other hand, interest groups—well-organized and informed—control monetary resources that can be invested in financing electoral campaigns and also their members tend to vote as a block.

Political rivalry is usually considered a factor that puts greater pressure on the governing party to satisfy the needs of its voters and interest groups. Nevertheless, political rivalry shows a nonsignificant influence, which may be explained by the lack of trust politicians have in this new form of citizen participation, as it appears to undermine their power in the long run. These findings are

even more surprising given that some studies, such as those by Welch, Hinnant, and Moon (2005) and Tolbert and Mossberger (2006), show that e-government users are more likely to trust government as a result of their experience.

Finally, the role played by ideology in the development of e–participatory government should be emphasized. In this work, we found that conservative parties are strong supporters of the different reforms emerging from the New Public Management approach and they show less fear of citizens' participation in the political decision-taking process through the Internet. However, we should take into consideration that conservative ideologies have a clear meaning in well-developed countries, whereas it is unclear in less developed and developing countries. In this respect, we have estimated the model proposed by breaking down the variable CONSERVATIVE into CONSERV1 and CONSERV2. The second one is a dichotomic variable that takes the value 1 when the governing party shows a conservative ideology and the country is considered as having a lower income according to World Bank criteria, and 0 otherwise. The first variable is also a dummy and takes the value 1 when the ruling party has a conservative ideology in the remaining countries, and 0 otherwise. The results of this new estimation are summarized in Table 8, showing that this political ideology is more prone to have an influence in developed countries. The remaining variables show similar findings to those obtained previously.

CONCLUSION

Although there is wide recognition of the existence of two approaches in the development of e-government—entrepreneurial and participatory—existing research mainly focuses on the development of e–entrepreneurial government. However, in this article our objective was to determine the explanatory factors for the level of development of e–participatory government in 189 countries' national administrations.

Our findings indicate that political opposition to e–participatory government often arises from politicians' fear that their power in the decision-making process will be undermined. They also underscore the nonsignificant role played by political competition in the implementation of e–participatory government, as governments with broad electoral majorities tend to think that they have a mandate for their electoral program and therefore are not motivated to remain cued to citizens' feedback.

Within this context, as our findings indicate, the style of administration and the pressure exerted by interest groups are the key factors for the development of e–participatory government. The role of voters, on the other hand, is more contingent in the development of e–participatory government. Citizens with high economic and class status tend to influence the e-governance or entrepreneurial stage of the development of digital government. But their influence does not carry onto to the e–participatory government stage of digital government. Also, it is worth reflecting

TABLE 8
Tobit regression results for CONSERVATIVE desegregation with dependent variable: e-participatory government

Variable	Hypothesis	Sign	Coefficient	SE	t
INTERNET	—	–	0.0032668	0.0014582	2.24**
OECD	—	–	0.0789905	0.0570838	1.38
CORRUPTION	—	–	0.0364875	0.0167548	2.18**
VOICE	—	–	–0.0559163	0.0241395	–2.32**
CONSERVADOR1	H1	+	0.0952147	0.0488435	1.95**
CONSERVADOR2	H1	+	0.0020607	0.1362224	0.02
ELECTION	H2	+	–0.0014041	0.0007341	–1.91**
COALITION	H2	–	–0.0533471	0.0688767	–0.77
STABILITY	H2	+	0.0019641	0.0259289	0.08
PARTIES	H3	+	0.0031646	0.0056035	0.56
GDP	H4	+	–0.0000767	0.0000618	–1.24
ADULTLITERACY	H4	+	0.000222	0.0009146	0.24
POPULATION	H5	+	0.0000000215	0.0000000101	2.13**
AGRICULTURE	H5	–	–.1740583	.0842383	–2.07**
Intercept			0.0101301	0.1063946	0.10
Chi squared = 104.34***					
Log-likelihood = 31.272015					

Note. Significance indicated by ***p < .01; **p < .05.

on the possibility that right-wing parties with their focus on reform of welfare and other social policies may use participatory mechanisms to project a friendlier face.

This study has some limitations that should be outlined. First, the study of participatory government requires more than Web surveys. In this respect, other electronic technologies—such as text messaging, mobiles or cell phones, or cable, satellite, and interactive television—may be equally important (Norris 2005). Also, the use of the Internet is relatively recent and it is likely to affect and reinforce the factors behind typical political activism, but it will not necessarily alter or transform broader patterns of civic engagement, at least within a short time. Furthermore, we have examined only the "client side" of the government sites and we have not assessed the "serverside" (e.g., user's demand for Web-based public involvement). Although Web sites provide users with a path toward participation in political processes, at this moment they simply indicate the presence of participatory elements (chat rooms, discussion forums, and opinion polls); therefore, they hardly indicate the extent to which the contributions by their citizens are actually included in the decision-making processes. To assess the extent to which citizens are allowed to participate in decision making, the observation of Web sites is a first stage, which lets us know the different possibilities citizen can cope with, but it is not sufficient. This interesting issue is beyond the scope of this article, and, in this regard, more qualitative research methods are required.

Similarly, the limitations of the statistical technique employed and, consequently, the variables used in the analysis should be noted. The advantages that econometric models provide regarding objectivity in the information treatment and the obtaining of statistical inference require the consideration of a high number of observations (in our study, countries) for each variable employed. These requirements oblige researchers to use variables that contain less detailed information, compared with those that can be obtained through other research methods.

Therefore, in future studies, it would be of interest to analyze the individual effect of different interest groups—such as trade unions, neighborhood associations, minority groups, entrepreneurs, and the like—on the development of e-government, by clarifying the aggregate effect observed in the current study. In addition, the role played by national policy in shaping Web-based participatory mechanisms should be analyzed, as well as the organizational and institutional changes required.

Also, as noted earlier, the use of case studies could complement this study. They would enable us to observe—individually and more closely—the behavior of interest groups, whose objectives are likely to vary, with some supporting and others opposing e-participatory government.

NOTE

1. Available at Central Intelligence Agency (2007, 1).

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APPENDIX A
POLITICAL STABILITY AND ABSENCE OF VIOLENCE/TERRORISM

Code Concept Measured
Representative Sources

DRI *Military Coup Risk*: A military coup d'etat (or a series of such events) that reduces the GDP growth rate by 2% during any 12-month period.
Major Insurgency/Rebellion: An increase in scope or intensity of one or more insurgencies/rebellions that reduces the GDP growth rate by 3% during any 12-month period.
Political Terrorism: An increase in scope or intensity of terrorism that reduces the GDP growth rate by 1% during any 12-month period.
Political Assassination: A political assassination (or a series of such events) that reduces the GDP growth rate by 1% during any 12-month period.
Civil War: An increase in scope or intensity of one or more civil wars that reduces the GDP growth rate by 4% during any 12-month period.
Major Urban Riot: An increase in scope, intensity, or frequency of rioting that reduces the GDP growth rate by 1% during any 12-month period.

EIU Armed conflict
Violent demonstrations
Social unrest
International tensions

GCS *Country terrorist threat:* Does the threat of terrorism in the country impose significant costs on firms?

HUM Frequency of political killings
Frequency of disappearances
Frequency of torture

IJT Security risk rating

IPD Conflicts of ethnic, religious, regional nature . . .
Violent actions by underground political organizations
Violent social conflicts
External public security

MIG *Extremism:* The term "extremism" covers the threat posed by any individuals or organizations that hold a narrow set of fanatical beliefs.
Extremists are likely to believe that any and all means are justified to eradicate the target of hostility, and are not afraid to destroy themselves in the process. This ideological aspect of extremism makes it highly unpredictable, and its close association with violence makes it highly dangerous. The extent to which extremism should be judged a threat to a particular business in a particular market can be assessed along the following lines: integration issues; religious tensions; pressure groups; terrorist activity; xenophobia.

PRS *Internal conflict*: Assesses political violence and its influence on governance.
External conflict: The external conflict measure is an assessment both of the risk to the incumbent government and to inward investment.
Government stability: Measures the government's ability to carry out its declared programs, and its ability to stay in office.
Ethnic tensions: This component measures the degree of tension within a country attributable to racial, nationality, or language divisions.

PTS Political terror scale

WMO *Civil unrest:* How widespread political unrest is, and how great a threat it poses to investors. Demonstrations in themselves may not be cause for concern, but they will cause major disruption if they escalate into severe violence. At the extreme, this factor would amount to civil war.
Terrorism: Whether the country suffers from a sustained terrorist threat, and from how many sources. The degree of localization of the threat is assessed, and whether the active groups are likely to target or affect businesses.
Nonrepresentative Sources

AEO Political troubles

APPENDIX A
POLITICAL STABILITY AND ABSENCE OF VIOLENCE/TERRORISM *(Continued)*

BRI Fractionalization of political spectrum and the power of the factions.
Fractionalization by language, ethnic, and/or religious groups, and the power of the factions.
Restrictive (coercive) measures required to retain power.
Organization and strength of forces for a radical government.
Societal conflict involving demonstrations, strikes, and street violence.
Instability as perceived by nonconstitutional changes, assassinations, and guerrilla wars.

WCY Risk of political instability

Source: Adapted from Daniel Kaufmann, Aart Kraay, and Masime Mastruzzi, "Gavernance Matters VII: Aggregate and Individual Governance Indicators, 1996–2007" (World Bank Policy Research Working Paper No. 4654, World Bank, Washington, DC, June 24, 2008), table B2.

APPENDIX B
VOICE AND ACCOUNTABILITY

EIU Orderly transfers
Vested interests
Accountability of public officials
Human rights
Freedom of association

FRH *Civil liberties*: Freedom of speech, assembly, demonstration, religion, equal opportunity, excessive governmental intervention
Political rights: free and fair elections, representative legislative, free vote, political parties, no dominant group, respect for minorities

FRP Freedom of the Press

GCS Newspapers can publish stories of their choosing without fear of censorship or retaliation
When deciding upon policies and contracts, government officials favor well-connected firms
Effectiveness of national parliament/congress as a law-making and oversight institution
Passive voice

GWP Confidence in honesty of elections

HUM Travel: domestic and foreign travel restrictions
Freedom of political participation
Imprisonments: Are there any imprisoned people because of their ethnicity, race, and/or their political, religious beliefs?
Government censorship

IPD Political rights and functioning of political institutions
Freedom of the press
Freedom of association
Freedom of assembly and demonstration
Respect for minorities (ethnic, religious, linguistic, etc)
Transparency of public action in the economic field
Transparency of economic policy (fiscal, taxation, monetary, exchange-rate, etc.)
Award of public procurement contracts and delegation of public service
Free movement of persons, information, etc.

PRS *Military in politics:* The military are not elected by anyone, so their participation in government, either direct or indirect, reduces accountability and therefore represents a risk. The threat of military intervention might lead as well to an anticipated potentially inefficient change in policy or even in government.
Democratic accountability: Quantifies how responsive government is to its people, on the basis that the less response there is the more likely is that the government will fall, peacefully or violently. It includes not only whether or not free and fair elections are held, but also an estimate of how likely the government is likely to remain in power.

RSF Press freedom index

APPENDIX B
VOICE AND ACCOUNTABILITY *(Continued)*

WMO *Institutional permanence:* An assessment of how mature and well-established the political system is.
Representativeness: How well the population and organized interests can make their voices heard in the political system
Nonrepresentative Sources

AEO Hardening of the regime

AFR Elections are free and fair

BTI Stateness
Political participation
Institutional stability
Political and social integration

CCR Civil liberties
Accountability and public voice

GII Civil society organizations
Media
Public access to information
Voting and citizen participation
Election integrity
Political financing

IFD Policy and legal framework for rural organizations
Dialogue between government and rural organizations

LBO Satisfaction with democracy
Trust in parliament

MSI Media sustainability index

OBI Open budget index

VAB Trust in parliament
Satisfaction with democracy
WCY Transparency of government policy

Source: Adapted from Daniel Kaufmann, Aart Kraay, and Masime Mastruzzi, "Gavernance Matters VII: Aggregate and Individual Governance Indicators, 1996–2007" (World Bank Policy Research Working Paper No. 4654, World Bank, Washington, DC, June 24, 2008), table B2.

APPENDIX C
MAIN FEATURES REVIEWED BY THE UNITED NATIONS E-GOVERNMENT SURVEY

UNDESA/DPADM February 2008

Assessment of the National and Ministerial Websites of the 193 United Nations Member States

A   Information dissemination/outreach

Existence of a national website and ministerial websites including: education, finance, health, labour and/or social services

Existence of a one-stop-shop national portal

Existence of a Head of State website

Existence of an e-goverment section

Sources of archived information (laws, policy documents, priorities, etc.)

News and/or updates on government policies

Access to back office applications

Chief Information Officer (CIO), or similar officer with a leadership role, to manage national cross-agency e-government programmes/projects

Information concerning government officials responsible for the provision of specific online services/queries

Personal account/profile of citzens, with the objective of enhancing dialogue between government and ctizens

Information for citizens on the usage of the website

B   Access/Usability

Search feature

"Contact us" feature

Audio and video features

Multiple languages availability

Use of wireless technology to send messages to mobile phones or devices

Security (secure link) feature available/indicated

Electron signature feature

Online payment by credit, debit, or other card methods

E-mail sign-up option, either as a formal list-serv or simply for news items

Existence of features to enable access for people with disabilities

C   Service Delivery Capability

One-stop-shop for online services

Downloadable/printable forms

Online forms

Job opportunities

Online transactions

E-mail alerts for e-participation

Really Simple Syndication (RSS) use for e-participation

Set turmaround time for government to respond to submitted forms/e-mails

D   Citizen participation/interconnectedness

E-participation policy or mission statement

Calender listing of upcoming e-participation activities

Archived information about e-participation activites

E-participation tools to obtain public opinion (polls, surveys, bulletin boards, chat room, blogs, web casting, and discussion forums, etc.)

Citizen feedback on the national strategy, policies and e-services

Provision for publishing the results of citizen feedback

Archive on responses by government to citizen's questions, queries and inputs

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Source: Adapted from Department of Economic and Social Affairs, Division for Public Administration and Development Management, *United Nations e-Government Survey 2008*, (New York: United Nations, 2008), http://unpan1.un.org/intradoc/groups/public/documents/un/pan028607.pdf, table 5.4.