Connecting eGovernment to Real Government - The Failure of the UN eParticipation Index

Åke Grönlund

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Åke Grönlund

Örebro University, Swedish Business School
Fakultetsgatan 1, Örebro 701 82, Sweden
ake.gronlund@oru.se

Abstract. eGovernment rankings are increasingly important as they guide countries' focus of their efforts. Hence indexes must not just measure features of web sites but also accurately indicate underlying government processes. eGovernment rankings are in a process of maturation in that direction, moving from purely measuring web sites to assessing use and government qualities. One such measurement is the UN eParticipation index, intended to measure how well governments connect to their citizens. This paper analyzes the quality of the index by validating it against other indexes of government-citizen relations qualities, democracy, internet filtering, and transparency. Results: The relation between the index and democracy and participation is non-existent. Countries which are authoritarian or obstruct citizen internet use by filtering can score high on eParticipation by window-dressing their webs. We suggest that the eParticipation index includes an element of reality check and propose ways to do that.

Keywords: UN, UNDESA, eGovernment, electronic government, index, eParticipation, Democracy

1 Introduction

eGovernment rankings are increasingly important as they guide countries' focus of their eGov efforts. Therefor it is important that indexes not just measure features of web sites but also accurately indicate the underlying processes. eGovernment rankings are in a process of maturation in that direction. Moving from purely measuring web sites they are moving on to assess use and users, hence aiming to measure government qualities.

There are a number of eGovernment indexes. Some of them have become frequently cited and used as benchmarks, guiding the debate as well as governments' investments in eGovernment. In the EU, regular benchmarking has over the past decade been used to guide the development and gague Europes development [1]. In a global perspective, frequently cited indexes include the recurrent UN e-Government rankings[1], the Economist's e-Government readiness index[2], and Brown university's

[1] The entire set can be retrieved at http://www2.unpan.org/egovkb/global_reports/index.htm
[2] The 2009 measurement can be retrieved at https://www-935.ibm.com/services/us/gbs/bus/pdf/e-readiness_rankings_june_2009_final_web.pdf

regular global e-Government studies[3]. The indexes are different in many ways, and they have changed over time. The UN index was originally quite similar to the EU one, measuring technical sophistication of government online services by means of ladder models starting from information on the web, over interactivity using e.g. online forms to full case handling, including decisions and payments as necessary. While different terms have been, and still are, used for these steps the general idea remains the same. More technical sophistication yields a better score. The Economist's index is much broader and measures "readiness" including not only technical features but also government quality aspects such as government policy, business climate in the country, and social and cultural environmnet factors. Finally, the Brown index still focuses on features of web systems but includes factors that specifically have to do with government qualities pertaining to interaction with citizens, such as the existence of a privacy policy, security policy, advertisements, the opportunity to comment, etc. [2].

As the result of the maturation of eGovernment services and the use of them, indexes mature. More use yields more data which can be analyzed, so indexes can increasingly include not just the potential of specific online tools but also the effects of them. Also ambitions increase. While automating government processes earlier was at the focus of eGovernment development, the explosive increase in use of social media has increased the requirements on eGovernment services to become "citizen-centric", including taking part in decision making, i.e. democratic participation [3]. According to the UN, "e-government should play an ever-greater role in development. Many countries have made tremendous strides in the last two years, due in part to recent, exciting advances in the diffusion of technology. With its responsive, citizen-centric qualities, I firmly believe that e-government can make a decisive contribution to the achievement of the MDGs, particularly in developing regions" [3, p iii]. With this ambition, there is clearly a need to make indexes of eGovernment actually reflect not just the "e" but actual government processes, methods, and policies.

To measure citizen-centricness the UN 2010 eGovernment index has been amended by a new set of measurements collectively labeled "eParticipation". This measure follows current research in the field and measures the availability of "polls, surveys, blogs, social networks, newsgroups and other interactive services that facilitate engagement" [3, p 96]. eParticipation is generally taken to be more or less directly related to democracy. This link is explicitly stated in the UN report; the e-participation index is to "bring some order to measurement of e-governance by positing the relevance of three factors in citizen engagement: electronic information dissemination, electronic consultation and electronic participation in decision-making [3, p.96]. The link is also established empirically by research. For instance, Sanford and Rose [4] found that research on eParticipation has largely concentrated on issues of deliberation and inclusion and is almost exclusively related to participation in the political process.

There are reasons for worry here. The eParticipation field is theoretically and empirically immature. First, the field of eGovernment itself does not have firm theoretical foundations [5], [6], [7]. The area of eParticipation is arguably even less theoretically founded. Although the state of eGovernment research has been in focus

3 http://brown.edu/Administration/News_Bureau/2006-07/06-007.html

in a number of literature reviews [8], contemporary research in the sub-area of eParticipation has only been partially reflected upon. Sæbø et al. [9] find it “eclectic” with many theories imported from other disciplines and not thoroughly tested as concerns their appropriateness in an eParticipation context.

The field is an integral part of eGovernment research, and it is theoretically focused on democracy models originating from the domain of political science and philosophy [4]. eParticipation has sprung from a field earlier called eDemocracy, but the relation between e-participation and democracy or e-democracy is confused [10]. The role of participation in democracy (both with no e:s) has been discussed for over two hundred years, and it is still contested. There are different democracy models, each attributing participation different roles. Adding the “e” to either or both terms has not made this relation clearer but rather confused it by adding the technology dimension without much discussion of the fact that technology is a mallable medium able to serve many types of participation, including bogus types designed to in fact prohibit real participation [11]. So far, eParticipation has taken off on a technology track. It has not connected to government in any clear way. This means measurement on eParticipation criteria is potentially dangerous as the models are not validated.

Against this backdrop, the purpose of this paper is to investigate the credibility of the UN eParticipation index as an indicator of the qualities of government it is intended to measure. These qualities are named “citizen-centricness" in the UN reports. Other terms used include “connecting to the citizens” or e-democracy [12], but they all explicitly relate to democracy and citizen participation in decision making. We do that by validating it using other, more established measurements of the processes, methods, and policies that eGovernment support, i.e. (real) government operations. We use indexes of democracy, internet filtering, transparency, and social climate; all important qualities of the relation between government and citizens.

2 Method

The underlying research model used in this paper is that participation requires political ambition (e.g. policy, legislation, methods etc.), technical facilities (here “eParticipation” tools), and a social climate conducive for participation. We showed above that the concept of eParticipation is clearly argued to be based on ideas of democracy. Therefore, this paper tests how well the eParticipation index matches indexes of democracy. The latter are more specifically defined as government policies and practices and a conducive social climate. Specifically, our proposal is that, to be usable as an index of participation in “real government”, the eParticipation measure, as a part of the eGovernment definition, must yield results that are in line with indexes of democracy. If not, it measures something else and should not be used for the purpose of measuring the participation aspect of eGovernment.

To investigate this proposal we test the UN eParticipation against three indexes that measure aspects of democracy.

1. The Economist Intelligence Unit’s (EIU) democracy index [13].
2. The Economist eGovernment index, specifically the “social and cultural environment” factor.

3. The OpenNet measure of internet filtering [14]

These indexes were chosen because they reflect important aspects of democracy. The first represents a holistic, theory-based view of democracy and measures government practices and policies, the second measures the social climate, which is a necessary but not sufficient precondition for democracy, and the third measures government policy and practice specifically for the electronic medium. Together they give a rich picture of participation in practice in each country. We test the relation between each of them and the UN eParticipation index as well as their interrelatedness, e.g. the correlation between index 1 and 2.

3 Theory: Indexes Measuring Democracy and Participation

The brief literature review above showed that researchers and practitioners agree that eParticipation should reflect democracy and democratic values in the field of electronic services from government. This means the index must not deviate too much from indexes measuring democracy in terms of outcomes. Clearly eParticipation measures items on web sites rather than the direct nature of governments, but it indirectly measures also government processes and the policy guiding these processes. Hence, a good eParticipation measure should not yield outputs which are incompatible with outputs from indexes measuring democracy and government nature.

There are numerous indexes concerning democracy and the nature of government. In this paper we limit our studies to a few which are commonly cited and measure crucial aspects of eGoverment.

1. The Economist Intelligence Unit's (EIU) democracy index [13]
2. The Economist eGovernment index
3. The OpenNet measure of internet filtering [14]

A brief look into these indexes show that they together cover important aspecs of democracy and participation, and hence also eParticipation.

1. The Economist Intelligence Unit's Index of Democracy is based on 60 measures grouped into five categories: (1) electoral process and pluralism; (2) civil liberties; (3) the functioning of government; (4) political participation; and (5) political culture. The measures draw on both available statistics and politics analysis. Examples of statistical measures for the category "Participation" include voter participation/turn-out for national elections, women in parliament, the extent of political participation, membership of political parties and political nongovernmental organisations, adult literacy, and percentage of population that follows politics in the news media (print, TV or radio) every day.

Examples of measures drawing on polls, analyses etc. include the preparedness of the population to take part in lawful demonstrations, the extent to which the adult population shows an interest in and follows politics in the news, to what extent the authorities make a serious effort to promote political participation, whether ethnic, religious and other minorities have a reasonable degree of autonomy and voice in the political process, and citizens' engagement with politics.

The category indexes are based on the sum of the indicator scores in the category, converted to a 0 to 10 scale. Countries are placed within one of four types of regimes:

- Full democracies (score 8-10)
- Flawed democracies (score 6 -7.9)
- Hybrid regimes (score 4 to 5.9)
- Authoritarian regimes (score below 4)

In all, the index can be described as theory-based and inclusive, drawing on many of the commonly held values and measures of participation. It covers the majority of countries in the world, 167 ones in the 2010 measurement, and is frequently referred to [13]. So far there have been three measurements, in 2006, 2008, and 2010.

2. *The Economist's e eGovernment readiness index* includes six categories which are weighted into the total index as follows; Connectivity and technology infrastructure (20%), business environment (15%), social and cultural environment (15%), legal environment (10%), government policy and vision (15%), consumer and business adoption (25%).

This paper focuses on the overall index and the Social and cultural environment category, for two reasons. First, the overall index is designed to measure "readiness" very broadly, using social, technical, policy, and business indicators. It should hence be a good guide to "participation" in a general sense. The underlying philosophy is that government, business and individuals need to be free to cooperate best possible for both business and government to blossom. Second, the Social and cultural environment is particularly interesting here because it includes several preconditions for participation on part of the individual. The category measures basic education, web-literacy, entrepreneurship, technical skills of workforce, and degree of innovation. These measures together cover many aspects of participation ranging from basic preconditions such as literacy to general ambition to innovate and take action. While not focusing specifically on political participation the category attempts to measure the "innovative climate" in a country.

3. *The OpenNet initiative (ONI)* for measuring Internet filtering involves researchers from the universities of Oxford, Harvard, and Toronto. Internet filtering, censorship of Web content, and online surveillance are reportedly increasing in scale, scope, and sophistication around the world. ONI maintains an index of Internet filtering where countries are profiled based on empirical tests for filtering as well as analysis of policies relating to media, speech, and expression. Legal and regulatory frameworks, including Internet law, the state of Internet access and infrastructure, the level of economic development, and the quality of governance institutions are analyzed as they are central to how countries implement Internet content controls. Together, these analyses are intended to offer "a concise, accurate, and unbiased overview of Internet filtering and content regulation." [14]

Each country is given a score on a five-point scale. The scores measure four themes reflecting the focus of the filtering:

1. *Political*: Web sites that express views in opposition to those of the current government, as well as content broadly related to human rights, freedom of expression, minority rights, and religious movements.
2. *Social*: Material related to sexuality, gambling, and illegal drugs and alcohol, as well as other topics that may be socially sensitive or perceived as offensive.
3. *Conflict/security*: Content related to armed conflicts, border disputes, separatist movements, and militant groups.
4. *Internet tools*: Web sites that provide e-mail, Internet hosting, search, translation, Voice-over Internet Protocol (VoIP) telephone service, and circumvention methods.

The scores reflecting the magnitude of the filtering for each of the themes are defined as:

1. *Pervasive filtering* has both depth —blocks a large portion of the targeted content— and breadth —filters several categories of a given theme.
2. *Substantial filtering* has either depth or breadth: either a number of categories are subject to a medium level of filtering or a low level of filtering is carried out across many categories.
3. *Selective filtering*: Narrowly targeted filtering that blocks a small number of specific sites across a few categories or filtering that targets a single category or issue.
4. *Suspected filtering*: Connectivity abnormalities are present that suggest the presence of filtering, although empirical test cannot confirm conclusively that inaccessible Web sites are the result of deliberate tampering.
5. *No evidence of filtering*. [14]

There is also a measure of the transparency and the consistency of the filtering. *Transparency* is a qualitative measure based on how openly a country conducts its filtering. *Consistency* measures the variation in filtering within a country across different Internet Service Providers.

Beyond these technical measures, the ONI country profiles draw on other indexes, which are not directly relevant for the purposes of this study, such as the World Bank governance index and International Telecommunication Union (ITU) statistics on Internet usage.

4 Results: The UN eParticipation Index Vs. Other Indices of Government Qualities

Testing the UN eParticipation index against the EIU democracy index, Figure 1 shows that there is no relation between them. A high ranking on democracy does not yield a good eParticipation rank.

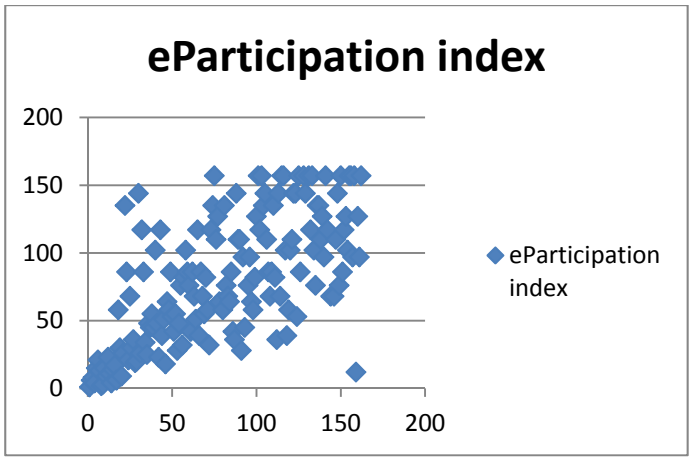

Fig. 1. Ranks on the UN 2010 eParticipation vs the EIU 2010 democracy index (x-axis). Lower rank is better (1st place is the best)

The fact that highly democratic countries do not score well on eParticipation is not necessarily a problem. It could just be that countries have not yet invested in eParticipation. What is worrying is that any country, no matter how undemocratic, can score high on eParticipation. Considering the EIU finding that 32.9 % of the world countries are authoritarian [13], it is worrying to see so many countries within this range score just as good as the top ones in the EIU ranking. In fact, the "full democracies", which are the top 15 % of the world countries, do not score significantly better than the authoritarian ones. Table 1 shows that the best 15 countries of the "authoritarian" group at the bottom of the EUI ranking score better than 50 % of the top 15 % EIU ranked "full democracies" in eParticipation.

Table 1. Averages for selected groups of countries

EUI index	UN eParticipation score average (0-1, 1 is best)
Top 15 % (30 countries), full democracies	0.42
10 best countries of bottom 30 % countries (authoritarian)	0.32
15 best countries of bottom 30 % (authoritarian)	0.29
Lower 50% of top 15 % (15 countries), full democracies	0.21

Because the eParticipation index measures items on web sites, the fact that even authoritarian regimes score well can be the result of trivial things. Having an online poll on the web does not mean people actually use it or that it is used to improve services. Moving on to more advanced eParticipation features, such as the use of social software to "engage" people in discussions, to voice opinions, participate in consultations etc., increases this web-reality gap. For people to dare to use such tools,

there is a need for a social climate conducive to participation. Oppressional regimes do not encourage individuals to voice opinions. This is a reason to look to indexes that also measure social factors. The Economist's eGovernment index is one such. Figure 2 shows that this index is fairly well related to the EIU democracy one as concerns the more democratic countries, but unrelated as concerns the least democratic ones. This means that the Economist's eGovernment index is a better indicator of democracy than the UN eParticipation indes is, even though this was not even the intention of the Economists' index, and even though the correlation is only valid for the top 2/3 of the countries. Put another way, the UN eParticipation index performs worse than even a general eGovernment index not specifically targeting eParticipation.

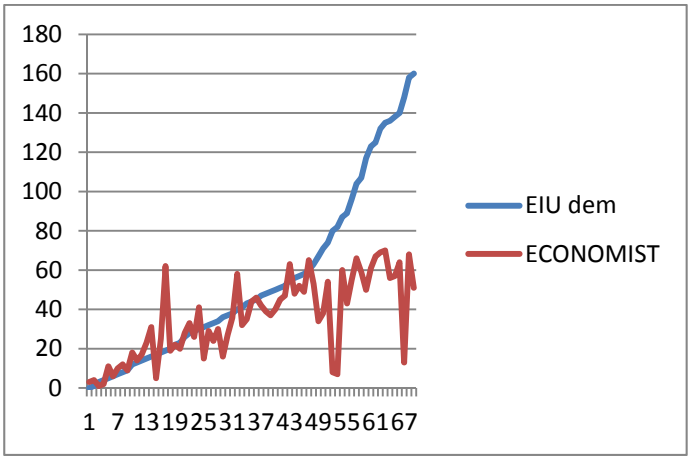

Fig. 2. Ranks on the EIU democracy index vs the Economist's eGovernment index (both 2010). Lower rank is better

This is despite the fact that the UN eParticipation index is in fact included as one item in the Economist's "Policy and Vision" category. To see whether this incorporation has influenced the Economist index to become more correlated with the democracy index we specifically compared those two. Figure 3 shows that there is no such correlation.

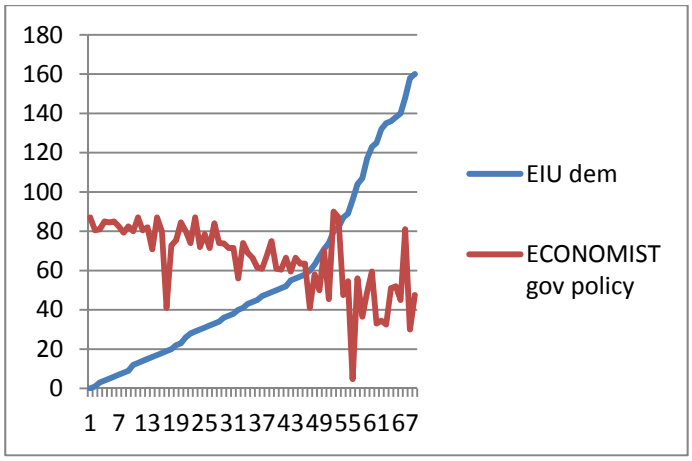

Fig. 3. EIU democracy index vs Economist's "Policy and vision" category of the eGovernment index, 2010.

To test for the conducive social environment we included the "Social and cultural environment" category of the Economist eGovernment index to see if that might be an indicator also of democracy. Figure 4 shows that the correlation is considerably better than for the UN eParticipation index. In fact, it is significant at the .01 level with a Pearson Correlation of .677.

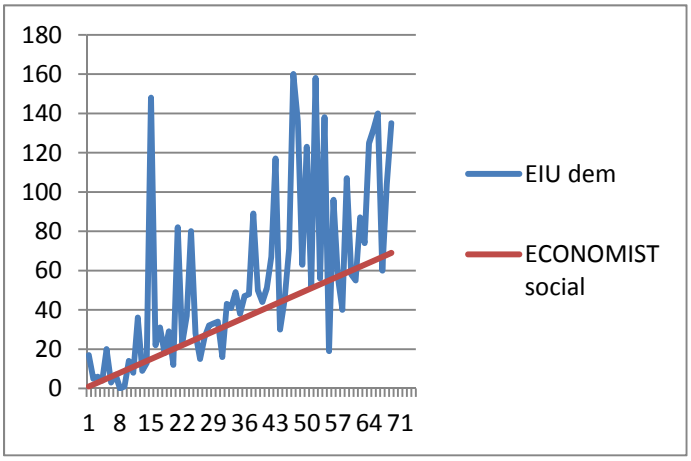

Fig. 4. EIU vs Economist social and cultural index

Turning now to government practice in the technology field concerning eParticipation we consider the ONI index for web censorship and filtering. Table 2 displays selected countries and shows that the addition of the eParticipation index into

the UN eGovernment ranking has meant that many un-democratic countries have improved their position. Table 2 also shows that many countries who have gained substantially in scoring due to the introduction of the eParticipation index (1st vs 2nd columns) at the same time score very bad on oppressing Internet use by filtering (5th column. Note that the higher the score the more severe the filtering), and on the general level of transparency (6th column).

Table 2. eParticipation ranking compared to Internet filtering, transparency and democracy.

Country	Rank in UN eGov index	Rank in UN eParticip. index	Rank/score/ category in EIU democracy index	ONI score on Filtering (0-16; 16 means most severe filtering)	ONI score on Transpar. (1-3; 3 is the most transpar.)
Pakistan	146	68	104/4.55/Hybrid	9	2
Kyrgyzstan	91	28	106/4.31/Hybrid	4	1
Sudan	154	102	151/2.42 /Authoritarian	8	3
China	72	32	136 3.14 /Authoritarian	16	1
Morocco	126	86	116/3.79 /Authoritarian	6	1
Ethiopia	172	135	118 /3.68 /Authoritarian	8	1
Belarus	64	51	130/3.34 /Authoritarian	8	1

These countires are also all authoritarian or "hybrid" regimes in the EIU index (4th column). It appears strange for an index that purports to value participation – expressly defined as a democratic value – to reward countries for a small number of web site features when the same governments blatantly work against participatory values in the regulation of the very same medium. They do not become more democratic, and should hence not become more "eParticipatory", due to exhibiting web features that cannot be used in practice anyway due to regulation, policy and culture.

5 Conclusions

Rankings are increasingly important as they guide countries' focus of their eGovernment efforts. Therefor it is important that indexes not just measure features of

web sites but also accurately indicate the underlying processes. eGovernment rankings are in a process of maturation in that direction. Moving from purely measuring web sites they are moving on to assess use and users, hence aiming to measure government qualities. One such measurement is the newborn UN eParticipation index. This is intended to measure how well governments connect to their citizens, an important quality aspect of government. This paper analyzes the quality of the index by measuring it against other indexes of government-citizen relations qualities, democracy, social and cultural environment, internet filtering, and transparency. We find that

1. The relation between the UN index and indexes of democracy and participation is non-existent;
2. Even very undemocratic countries can score high on UN eParticipation;
3. Countries who severely obstruct citizen internet use by filtering can score high on eParticipation by introducing technical tools on their web;
4. Authoritarian countries who blatantly and persistently obstruct Internet use can improve their eGovernment score considerably by adding some eParticipation features on their webs;
5. Democratic participation is much better measured by the Economist's general eGovernment index, in particular the "Social and cultural environment" section of that index which is significantly related to the EIU democracy index.

All in all, measuring eParticipation by the UN index is wrong. It does not measure the values which are proposed as its underpinnings, namely the democratic values which are the foundation of eParticipation research. It is also potentially dangerous as its name gives a kind of democratic gloss to the eGovernment index which is in fact contradicted in its practice.

To arrive at a credible eParticipation index there is a need to introduce an element of reality check. This requires two types of modifications. One is to include some measure of actual use, for example the ONI web filtering index. This is the same method as is already used for other categories of the UN index, where measurements of web sites are complemented by national and international statistics, e.g. from the ITU. Applying the same method to the eParticipation category we suggest defining a composite index including the two ones we have used here – democracy and internet filtering – as a complement to the online tools currently measured by the UN. This way no country could boost their score by window-dressing, by putting some new politically correct electronic tools on their web site. Another measure would be to remodel the inspection of the eParticipation tool list so as to also include use items, e.g. number of postings and number of participants in a discussion forum.

eGovernment must relate to real Government. Only by enforcing rating methods that combine both that we can get real effects. The UN eParticipation index as of today is a dangerous tool because it is not related to the real world of government.

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