Towards an Evaluation Model for Open Government: A Preliminary Proposal

Rodrigo Sandoval-Almazan[1] and J. Ramon Gil-Garcia[2]

[1] Universidad Autónoma del Estado de México, Mexico
rsandovala@uaemex.mx
[2] Center for Technology in Government, University at Albany, USA
Centro de Investigación y Docencia Económicas, Mexico
jgil-garcia@ctg.albany.edu

Abstract. Open government implementation connects to several actions: public policy design, software implementation, website development, policy informatics, and the development of new regulations. Despite this important progress, very little has been done to measure the impact of open government and provide feedback in terms of the next steps for implementation. Furthermore, very few models intend to explain the functions, characteristics, or the future of this new trend toward openness. Our research from 2006 to 2012 uses a multi-component model to measure open government websites in the 32 Mexican state governments. However, the website model could become obsolete as a result of technology advancements. This paper analyzes some knowledge gaps and potential problems with this type of model and proposes a new approach to open government portals based on four conceptual pillars: wikinomics, open data, new institutionalism, and the fifth state (Network State).

Keywords: open government, models, transparency, e-government, open data.

1   Introduction

Parks [1], who first introduced the term open government, did not imagine the repercussions of his idea within the next century. Today governments around the world implement ideas of open government through corresponding policies [2–5]. However, open government initiatives currently face several problems related to a lack of clarity, including the conceptualization of the term, its functions and limitations, and in the research models used to understand it.

Open government has evolved along several paths. The Freedom of Information Act (FOIA) become the first step to building this concept; Richardson [6] states the "right to know" was the initial idea for this path, which other scholars also describe as a key starting point [7–9]. A different path pursues open data, in which government data must be transparent, reusable, standardized, and updated, among other aspects. The concept of open data introduced the importance of collaboration and information sharing [10].

This kind of conceptual path has led to the belief that the worldwide "open government initiative would establish a system of transparency, public participation, and collaboration" [11]. For this paper, open government is conceived "as an institutional and technological platform that transforms government data into open data to allow citizens' use, protection, and collaboration in public decisions, accountability, and improvement of public services" [12]. This definition allows for several interpretations, such as: (1) open government can be understood as a platform that translates government data into the citizen's language; (2) these transformations allow citizens to protect, reuse, collaborate, or interact with data in several forms; and (3) as a result of this transformation, citizens are empowered to scrutinize public officials' decisions and actions to enhance accountability and to then propose different alternatives for public services and other government actions. However, discussion about the open government concept and the development of theoretical frameworks for it are underdeveloped in this field of research [13–15].

A second problem the open government trend faces is related to the delineation of its functions and limitations. Dawes [16] identifies some limits to open government with respect to the concept of stewardship and usefulness of the data. When looking at the functions of open government, it can be understood as a tool that allows public officials to release data from the government for the general public's use. And it has several dimensions, like open data visualization tools [17] and open data [18], which combined could be seen as the Big Data perspective [19, 20]. Open government's limitations are linked to information policies [21], cultural resistance from public officials [22], and the problem of trust in government agencies [23]. Some scholars are pursuing research agendas to address these issues. In contrast, we want to focus specifically on the development of models to assess open government initiatives.

The purpose of this paper is to propose a new assessment model for open government portals and it is organized into five sections, with this introduction as the first. Section two includes a literature review focused on models for assessing open government websites. The third section describes an older assessment model that was used for six years of continuous evaluation of Mexican portals, while section four explains the advantages, weaknesses, and limitations of that previous model. Section 5 proposes a new model, based on recent theoretical developments and current technologies, after which we make a few concluding remarks.

2   Literature Review: Open Government Assessment Models

One of the problems of open government is changing the government paradigm in order to introduce it and really allow the disclosure of government information [24]. This paradigm change could be reformulated by the construction of a model to facilitate understanding of open government implementation and offer recommendations to guide open government development [25–27]. However, the purpose of this paper is more limited. It is based on assessment models of e-government efforts. Researchers have created preliminary models to analyze the maturity of e-government and open data [28], which we can group them in two main categories: (1) models that assess systemic changes of open government and (2) models that assess open data achievements. In the first category, three models are included: the Kalampokis [29] stage

model, the Scholl and Luna-Reyes [33] systemic model, and the Open Government Implementation Model (OGIM) [26]. The second category includes the implementation framework for Open Data in Colombia [30] and the model to assess open data in public agencies from Solar [31]. This section will briefly describe each of these models as they provide some of the conceptual basis for the model we developed in 2007.

Research models are important ways to frame reality and try to provide rational explanations about phenomena; however, it is not easy to find such models and they are usually ongoing projects because they required permanent update and feedback. One of the first models related to open government was developed by an international team [28]. This e-Government Maturity Model has three dimensions: information criteria, IT resources, and domains. This proposal has some additional variables that go beyond IT, such as e-Strategy, IT Governance, Process Management, and People and Organizational Capabilities. The purpose is to understand the integrated process of e-government through maturity. This early model is important to our research for two reasons: it reflects the introduction of a rational model to the e-government assessment perspective and it shares the integrated concept of evaluation from our original model, although we discard the idea of maturity because open government portals are mostly regulated by law and technological trends rather than an evolution in maturity [32].

Kalampokis [29] developed a second model in 2011 to assess open government data, which has two main dimensions: the first one is related to organizational and technological complexity and the second one is related to added value for data consumers. This proposal is more operational and focused on one section of the open government process—the data.

A different proposal with a more integrated perspective is the Open Government Implementation Model (OGIM) [26], which is a stage model that guides government agencies on their journey to open government. The model defines four main implementation stages and describes the deliverables, benefits, challenges, best practices, and metrics for each stage. The goal of Stage 1 is increasing data transparency; stage 2's objective is moving on to improving open participation (like open collaboration). Stage 3 is focused on realizing ubiquitous engagement and finally stage 4 harnesses the power of social media in order to engage the public. The OGIM model is closer to our research because it intends to measure the global outcomes of an open government implementation through the four stages. However, our research model is more focused only on open government websites rather than other implementations of this trend.

The last model was developed by Scholl and Luna-Reyes [33] and it uses dynamic systems theory to introduce more actors and variables into the implementation of open government, such as elected officials, executive power, and regulations and norms, to better understand the maturity and evolution of open government applications. From this review of four models we can conclude the following: (1) there is no single model to assess open government implementation; (2) models for assessing complete implementation of open government exist, but not specifically for open government websites; and (3) maturity is a constant in many models, but may not apply to this research area.

3   Assessment Model for Open Government Portals (2007-2012)

The main purpose of this model was to assess the progress of open government implementation among state web portals in Mexico. It is focused on the development of websites to introduce open government functions; it does not measure the impact of open government in other areas of state public administration. The model was built from two sources: a survey and then interviews with webmasters of Mexican state open government websites, with the interviews held during a professional meeting in October 2005. Once the data was collected, we identified different components of open government websites, which were validated with concepts from academic literature. We presented a first proposal in April 2006 to the webmasters who participated in the earlier data collection and used their opinions to refine the model. The final model has seven components:

1. Trust
2. Information value
3. Accountability
4. Constant innovation and change
5. Law accomplishment
6. Internal agency transparency
7. Information systems or search engines

1. Trust. This component was proposed to achieve the goal of measuring trust in public information. It measures three related questions focused on perception of information: (1) Information is trustworthy, (2) Information is validated by other sources, and (3) Website (interface) seems trustworthy.

2. Information value. This component answers the question: does this information produce value for citizens? Examples of when information has value include whether it is reusable, easy to find, helps inform decision-making, and is clear and understandable to the average person.

3. Accountability. The purpose of this component was to assess tools and functions that allow for individual and organizational accountability. The way that organizations enable citizens' claims, feedback, or accusations of misconduct from public officials were measured here.

4. Constant innovation and change. This component measures ongoing innovations or changes in the actual interface that could be considered valuable for users.

5. Law accomplishment. The Information Access Law, published in 2002, requires all Mexican government agencies to have open government websites and establishes minimum information standards, including the capability for citizens to ask for information and data disclosure. This component assesses the degree of compliance with these basic regulations.

6. Internal agency transparency. A constant request from webmasters in 2005 was to devise a way to force internal agencies to deliver government information on time. This component assesses state government efforts to deliver information in a timely fashion, such as publishing a ranking for internal agency performance on open government information.

7. Information systems or search engines. The objective of this component is to assess the search engine capabilities to retrieve information and the internal development of software to manage and capture data for the open government website.

The idea of this seven component model was to integrate legal regulations, interface standards, open government practices such as release information, accountability, and standards like information value and user trust in this first stage of open government implementation in Mexico. Several state governments used this research, which was published in a national magazine every year [34–36], to make decisions and design improvements for their portals.

In order to test this model we conducted a pilot test in 2006 and adjusted some questions and components. The first evaluation was conducted in 2007 and was continued annually until 2012, during February and March. The goal was to evaluate the 32 state government websites within two visits of 30 minutes maximum and collect the data to elaborate a ranking among the state governments.

4   Challenges and Problems of the 2007 Assessment Model

The assessment model for the open government portals was based on the technological trends of the first decade of the 21st Century; however, several important changes in technology (which Friedman describes [37]) forced adaptations to the model, At least three technological changes had a direct impact on the assessment model and two institutional changes indirectly impacted the model.

The first technological change is the speed of computational devices. Most powerful processors enable the development of software to support simultaneous operations. These changes allow government organizations to interact with larger databases and develop software to personalize search and use data more efficiently. This change affects the components of information value, information systems, and search engines.

The second technological change is the Web 2.0 trend [38]. The widespread use of Twitter, Facebook, blogs and wiki platforms to create content, exchange ideas, or interact with information creates new conditions for citizens to share, publish, and collaborate with information. The frequent use of this technology by government organizations and citizens transforms the use of government data and the relationship government has with its constituents [24]. Web 2.0 indirectly impacted all components of the assessment model.

The last technological change was the introduction of big data technologies to analyze, collect, and systematize large amounts of government data, usually stored in government data warehouses. The introduction of this capacity to handle a large volume of data increases the potential uses of government data and transforms the processes by which governments disseminate, publish, and share data [18, 19]. This change positively affected information sharing, diffusion of the data, and improved collaboration using new and more reliable data.

An important institutional change that transformed open government portals in Mexico was the introduction of the National Information Access Law that creates more protections for personal data and provides for sanctions against governments that do not comply with the publication of basic data required in the law. These new regulations increase with the second institutional change: the creation of the Open Government Partnership in September 2012. From the beginning, Mexico became a member of this partnership and assumed responsibilities and commitments with specific objectives and dates to accomplish them in the short term [39]. These two conditions forced the federal and state governments of Mexico to change their portals, which affected the utility of the previous open government assessment model.

5   New Assessment Model: A Proposal

Following our review of the literature surrounding different models related to open government and an analysis of previous assessment models, we propose a new model for open government website assessment based on five components: (1) Legal Obligations; (2) Open Data; (3) Collaboration; (4) Co-production; and (5) Institutional Arrangements (see Table 1).

Table 1. Open government research model proposal

Component	Description	Variables
Legal Obligations	Assess public policies at all government levels	Rules, agency relations, public policies
Open Data	Assess degree of advancement in open data and use of technology to organize and disseminate data	Open government data principles, cloud government, mobile government.
Collaboration	Assess tools and initiatives to promote collaboration among citizens	Collaboration tools with the use of Web 2.0
Co-production	Assess peer production, tools, process, and policies to promote feedback and accountability	Tools, apps, processes that enable peer production
Institutional Arrangements	Metrics on changes in internal processes, institutional relationships with power that facilitate open government	Information costs, transaction costs, agreements, rules and processes for open government

These components are directly linked to four theoretical pillars that summarize and combine previous empirical and theoretical research. Following, we describe the four pillars and their link to the proposed model.

5.1   First Pillar: Wikinomics

A very interesting example of open government in the U.S. has been the change to the patent system by including collaboration from the scientific community. This revolution was based on the ideas of peer collaboration, sharing information, and the use of technology in a process called Wiki Government [40]. These principles come from

Tapscott and Williams's [41] perspective that wikinomics demonstrates the principles of the so-called new economy: collaboration, co-production, peer sharing, and exchange of information. At least two components of open government websites are related to this principle: collaboration and co-production. We understand that openness with citizens—or the users of information—cannot be possible without considering both horizontal and vertical collaboration between producers and users of information, as well as the constant need to update and review government information using technological means. The Wiki Government concept promotes this kind of behavior and improves the release of the data. Peer-to-peer activities are possible using a common platform of collaboration and co-production in which users, both public officials and citizens, can be seen as prosumers (in the words of Tapscott and Williams)--people who produce and consume information at the same time.

5.2   Second Pillar: Open Data

This pillar is directly related to the second component of the model with the same name. We realize that open government implementation processes align with open data practices. Geiger and Von Lucke [18] establish that open data are all stored data that can be accessible to the public without any kind of restriction on use and distribution. Since 2007, O'Reilly has operated the Open Government Working Group that proposes eight principles of open data [42] that complement Geiger and von Lucke's ideas. From this perspective, open data will be the best complement for the organizational tasks of opening government processes, files, and procedures and is the main outcome directly related to citizens' information needs. We believe that part of an integrated measurement of open government portals must be the degree to which open data is available, as well as their quality and usefulness.

5.3   Third Pillar: The Network State or Intelligent Government

The idea of the fifth state by Dutton [43] proposes the Internet as a platform for new relationships between citizens and government. This complements Castells's [44] perspective on changing the legal perspective of the state and transforming it on a state related to nodes, links, and interrelations in a network. This new state is more the consequence rather than the cause of open government, in which the use of Web 2.0 forms the basis for Government 2.0 where policy makers and citizens collaborate to create data and share responsibility for government decision-making. It represents a new characterization of a smart state, which uses artificial intelligence, sensors, and other information technologies and reduces time, processes, and distances for citizens and government officials,[45]. The model components that measure this pillar over time and along transparency tasks are institutional arrangements and legal obligations.

5.4   Fourth Pillar: New Institutionalism and Sociotechnical Theory

Two theoretical frameworks explain the emergence of the network state. First, new institutionalism suggests that the introduction of open government will yield new

ways to arrange relationships and coordination among institutions, which can be seen in the release process for data and updates to the websites. Secondly, sociotechnical theory links technology with human perspectives and the organizational background [46]. If we conceived that individuals behave and interact inside institutions [47] and these institutions are now open and without boundaries in terms on information, we must try to assess change and maturity in these behaviors along the different implementations of open government.

5.5   Connections Across the Pillars

More research on the relationships among the pillars and the more specific components of the model is needed to make the proposed model feasible and operational. However, some initial relationships are shown in Figure 1. For example, the first pillar, Wikinomics, is related to the collaboration and co-production components. The second pillar, Open Data, is related to the component with the same name, but also relates to co-production as one of the main avenues to produce and release data. The pillar called Network State and Intelligent Government is related to the development of institutional arrangements and collaboration opportunities. Finally, the fourth
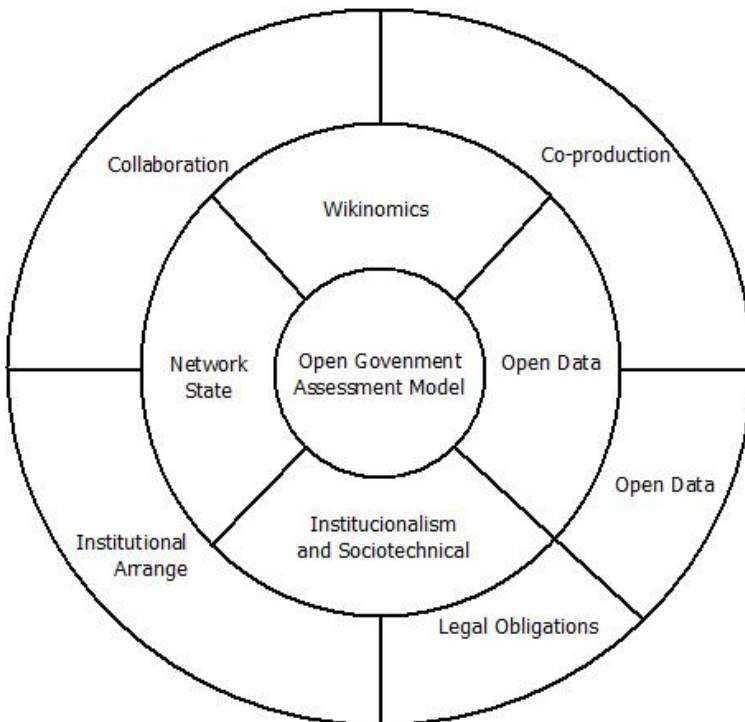

Fig. 1. O-Government Assessment Model

pillar of New Institutionalism and Sociotechnical Theory is related to the production of legal obligations and institutional arrangements.

In order to solve the problems confronting assessment models as described in the previous section, we intend to solve the first two technological problems, the speed of change and the adoption of Web 2.0, with the first pillar of Wikinomics. The model components from this pillar are collaboration and co-production as the main tools to facilitate the Wikinomics concept. The next technological problem of big data will be addressed using the open data strategies that governments now develop and will be reflected in the open data model component. The institutional challenges from the National Information Access Law and the Open Government Partnership are addressed using the Network State framework and New Institutionalism and Sociotechnical Theory in order to stabilize the legal platform and create broad objectives for the open government implementation.

6   Final Remarks

Assessment of open government websites must be standardized, but also constantly changing and adapting to new conditions. Evaluation tools should be able to produce modifications and improvements to the actual websites in order to help citizens in the task of understanding open government data, processes, and information. Our 2007 model helped to accomplish this task in Mexican transparency portals, since many state CIOs were paying attention to the variables and particular technologies included in the assessment and they modified and aligned their own portals to make them consistent with the evaluation tool. However, a new model is needed now; a model that captures new contexts, new technological trends, and a more IT-savvy citizen.

This new model will begin to fill three existing gaps in open government research. The first one is to promote better and more systematic metrics for the design and implementation of open government initiatives. Second, this paper should help to improve our current understanding of the impacts—positive or negative—of open government on other important concepts in public administration such as transparency, accountability, co-production, and institutions. Third, this study contributes to the development of models to assess maturity and evolution of these open government portals, but also to broadly understand the progress that has been made in this field of research.

The proposed new model has to be tested and analyzed using real open government and transparency portals. In order to do this work based on the new theoretical pillars and their related specific concepts, our next steps should be to develop a questionnaire to measure the components, to perform a pilot test, and to collect the necessary evidence from Mexican portals. This first data collection effort could then produce better explanations and theoretical insights about the impact of open government as a way to interact with and engage citizens, businesses, and other stakeholders.

References

1. Parks, W.: The Open Government Principle: Applying the Right to Know under the constitution. George Wash. Law Rev. 26, 1–22 (1957)
2. Alanazi, J., Chatfield, A.: Sharing Government-Owned Data with the Public: A Cross-Country Analysis of Open Data Practice in the Middle East. In: 18th Americas Conference on Information Systems (AMCIS 2012), pp. 1–10 (2012)
3. Lucke, P.D.J., von, G.K.: Open Government Collaboration. In: Gascó-Hernández, M. (ed.) Open Government, pp. 189–204. Springer, New York (2014)
4. Bertot, J.C., Jaeger, P.T., Grimes, J.M.: Promoting transparency and accountability through ICTs, social media, and collaborative e-government. Transform. Gov. People Process Policy 6, 78–91 (2012)
5. Bertot, J.C., Jaeger, P.T., Hansen, D.: The impact of polices on government social media usage: Issues, challenges, and recommendations. Gov. Inf. Q. 29, 30–40 (2012)
6. Richardson, E.L.: Freedom of Information. Loyola Law Rev 20, 45 (1973)
7. Drachsler, D.A.: Freedom of Information Act and the Right of Non-Disclosure. The. Adm. Law Rev. 28, 1 (1976)
8. Bayne, P.: Freedom of Information. Leg. Serv. Bull. 9, 121 (1984)
9. Birkinshaw, P.: Freedom of information and its impact in the United Kingdom. Gov. Inf. Q. 27, 312–321 (2010)
10. Lathrop, D., Ruma, L.: Open Government: Collaboration, Transparency, and Participation in Practice. O'Reilly Media (2010)
11. McDermott, P.: Building open government. Gov. Inf. Q. 27, 401–413 (2010)
12. Sandoval-Almazan, R.: La larga marcha del Gobierno Abierto. Teoría, medición y futuro. INAP, Mexico City (2013)
13. Fishenden, J., Thompson, M.: Digital Government, Open Architecture, and Innovation: Why Public Sector IT Will Never Be the Same Again. J. Public Adm. Res. Theory 23, 977–1004 (2013)
14. Scholl, H.J.: Five trends that matter: Challenges to 21st century electronic government. Inf. Polity Int. J. Gov. Democr. Inf. Age 17, 317–327 (2012)
15. Prieto, L.M., Rodríguez, A.C., Pimiento, J.: Implementation framework for open data in Colombia. In: Proceedings of the 6th International Conference on Theory and Practice of Electronic Governance, pp. 14–17. ACM, New York (2012)
16. Dawes, S.S.: Stewardship and usefulness: Policy principles for information-based transparency. Gov. Inf. Q. 27, 377–383 (2010)
17. Graves, A., Hendler, J.: Visualization tools for open government data. In: Proceedings of the 14th Annual International Conference on Digital Government Research, pp. 136–145. ACM, New York (2013)
18. Geiger, C.P., von Lucke, J.: Open Government and (Linked) (Open) (Government) (Data). JeDEM - EJournal EDemocracy Open Gov. 4, 265–278 (2012)
19. Keiser, B.E.: Big Data, Open Government, and Sunlight. Inf. Today 30, 1–33 (2013)
20. Bertot, J.C., Choi, H.: Big data and e-government: issues, policies, and recommendations. In: Proceedings of the 14th Annual International Conference on Digital Government Research, pp. 1–10. ACM, New York (2013)
21. Dawes, S.S., Helbig, N.: Information strategies for open government: challenges and prospects for deriving public value from government transparency. In: Wimmer, M.A., Chappelet, J.-L., Janssen, M., Scholl, H.J. (eds.) EGOV 2010. LNCS, vol. 6228, pp. 50–60. Springer, Heidelberg (2010)

22. Bertot, J.C., Jaeger, P.T., Grimes, J.M.: Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. Gov. Inf. Q. 27, 264–271 (2010)
23. Bannister, F., Connolly, R.: Trust and transformational government: A proposed framework for research. Gov. Inf. Q. 28, 137–147 (2011)
24. Newsom, G., Dickey, L.: Citizenville: How to Take the Town Square Digital and Reinvent Government. Penguin Press HC, The (2013)
25. Sandoval-Almazan, R.: The Two Door Perspective: An Assessment Framework for Open Government. J. E-Democr. 3, 29–45 (2011)
26. Lee, G., Kwak, Y.H.: Open government implementation model: a stage model for achieving increased public engagement. In: Proceedings of the 12th Annual International Digital Government Research Conference (dg.o 2011), pp. 254–261. ACM, College Park (2011)
27. Lee, G., Kwak, Y.H.: An Open Government Maturity Model for social media-based public engagement. Gov. Inf. Q. 29, 492–503 (2012)
28. Iribarren, M., Concha, G., Valdes, G., Solar, M., Villarroel, M.T., Gutiérrez, P., Vásquez, Á.: Capability Maturity Framework for eGovernment: A Multi-dimensional Model and Assessing Tool. In: Wimmer, M.A., Scholl, H.J., Ferro, E. (eds.) EGOV 2008. LNCS, vol. 5184, pp. 136–147. Springer, Heidelberg (2008)
29. Kalampokis, E., Tambouris, E., Tarabanis, K.: Open Government Data: A Stage Model. In: Janssen, M., Scholl, H.J., Wimmer, M.A., Tan, Y.-H. (eds.) EGOV 2011. LNCS, vol. 6846, pp. 235–246. Springer, Heidelberg (2011)
30. Prieto, L.M., Rodríguez, A.C., Pimiento, J.: Implementation Framework for Open Data in Colombia. In: 6th International Conference on Theory and Practice of Electronic Governance, pp. 14–17. Association for Computing Machinery, Albany (2012)
31. Solar, M., Concha, G., Meijueiro, L.: A Model to Assess Open Government Data in Public Agencies. In: Scholl, H.J., Janssen, M., Wimmer, M.A., Moe, C.E., Flak, L.S. (eds.) EGOV 2012. LNCS, vol. 7443, pp. 210–221. Springer, Heidelberg (2012)
32. Hewson, C., Laurent, D.: Research Design and Tools for Internet Research. In: The SAGE Handbook of Online Research Methods, pp. 58–78. Sage (2008)
33. Scholl, H.J., Luna-Reyes, L.F.: Transparency and openness in government: a system dynamics perspective. In: 5th International Conference on Theory and Practice of Electronic Governance (ICEGOV 2011), pp. 107–114. ACM (2011)
34. Sandoval-Almazan, R.: Ranking de Portales de Transparencia: La medición 2010 (2010)
35. Sandoval-Almazan, R.: Midiendo la Transparencia en Internet: Ranking de las páginas web de los Institutos de Transparencia en Mexico. Federalismo Y transparencia en Mexico: seis estudios de Caso, pp. 219–247. Alianza Civica-Comunidad Europea, Ciudad de Mexico (2009)
36. Sandoval Almazan, R.: Portales de transparencia: La evolución (2013)
37. Friedman, T.L.: The World Is Flat: A Brief History of the Twenty-first Century. Farrar, Straus and Giroux (2005)
38. Chun, S.A., Shulman, S., Sandoval, R., Hovy, E.: Government 2.0: Making connections between citizens, data and government. Inf. Polity 15, 1–9 (2010)
39. OGP: Open Government Declaration | Open Government Partnership, http://www.opengovpartnership.org/open-government-declaration
40. Noveck, B.S.: Wiki Government: How Technology Can Make Government Better, Democracy Stronger, and Citizens More Powerful. Brookings Institution Press (2009)
41. Tapscott, D., Williams, A.D.: Wikinomics: How Mass Collaboration Changes Everything. Portfolio Hardcover, New York (2006)

42. Open Government Working Group: 8 Principles of Open Government Data - OpenGovData.org, `http://www.opengovdata.org/home/8principles`
43. Dutton, W.H.: The Fifth Estate Emerging through the Network of Networks. Prometheus 27, 1–15 (2009)
44. Castells, M.: Comunicación y Poder. Alianza Editorial, Madrid, España (2009)
45. Gil-Garcia, J.R.: Towards a smart State? Inter-agency collaboration, information integration, and beyond. Inf. Polity Int. J. Gov. Democr. Inf. Age 17, 269–280 (2012)
46. Powell, W.W., DiMaggio, P.J. (eds.): The New Institutionalism in Organizational Analysis. University Of Chicago Press (1991)
47. Senge, K.: The "New Institutionalism" in Organization Theory: Bringing Society and Culture Back In. Am. Sociol. 44, 76–95 (2013)