An e-Democracy Experience: Digital Cabinet Office of Rio Grande do Sul State (Brazil)

Marie Anne Macadar, Gabriela Viale Pereira and Vanessa Marques Daniel

Pontifical Catholic University of Rio Grande do Sul
Av. Ipiranga, 6681, Prédio 50, 90.619-900
Porto Alegre – RS - Brazil
(55) (51) (3320-3524)

marie.macadar@pucrs.br, gabiviale@terra.com.br, nessa.daniel@gmail.com

ABSTRACT
This paper aims to identify the influence of institutional factors in implementing e-Democracy practices at the Digital Cabinet Office of Rio Grande do Sul State (Brazil). Institutional theory is used as the theoretical framework in this case study and supported the construction of the conceptual model based on some propositions. This is a research in progress and, therefore, just a few initial issues are pointed out. However, they show that the researchers must continue working in this case study in order to bring some contributions to e-Government theory.

Categories and Subject Descriptors
K.4.1 [Computers and Society]: Public Policy Issues - Use/Abuse of Power

General Terms
Management, Theory

Keywords
e-Government, e-Democracy, Participation

1. INTRODUCTION
In the last decades, the social setting of human life has been remodeled by the technological revolution produced by Information and Communication Technologies [4]. Considering current technological changes, one feels the need for an effective ICT management in government. The Brazilian reform in public management idealized in 1995 has emphasized such a need. The term electronic government (e-Gov) has been introduced to refer to the use of ICT in public management for improving administration, for delivering government information and services, and also for introducing citizen engagement and participation in government [5][10].

Heeks and Bailur [11] regard the acknowledgement of contextual factors - besides technological ones - as a positive aspect in e-Government research. This study is, therefore, relevant since it aims to analyze the relation between institutional factors and the

implementation of e-Democracy practices in Brazil.

This research is in the context of IT government adoption and management for widening communication channels between these organizations and society by means of web portals for citizen participation. Our goal is *to identify the influence of institutional factors in the implementation of e-democracy practices*. The theoretical framework used here is institutional theory, which postulates that organizations tend to adopt similar structures forming a homogeneous field in order to get the recognition in the environment they are inserted. Institutional theory has constructs which allow the analysis of the organizational environment of public management and the influence of institutional factors in the adoption of technology in organizations.

This paper is an early study about the Digital Cabinet in Rio Grande do Sul (Brazil) and, as pointed out before, institutional theory will provide our theoretical basis, briefly presented in sections 2 and 3 below. Section 4 shows the methodological aspects of the research and the propositions to be tested. The case study is then introduced in section 5 and final considerations are made in Section 6.

2. THE INSTITUTIONAL PERSPECTIVE AND GOVERNANCE
There is a consensus that influential organizations have the power to legitimate others in their social environment and the ability to influence their decision-making process. In this context, governments are regarded as the organizations with more power to intervene in others [14]. However, King et al. [12] argue that institutional factors are essential components to understand the adoption of innovations in IT that cross-organizational borders. According to Scott [16], regulative, normative and cognitive factors exert influence on the adoption of IS in public administration. Regulative factors "involve the capacity to establish rules, inspect others' conformity to them, and, as necessary, manipulate sanctions-rewards or punishments-in attempt to influence future behavior" (p.52)[15]. Processes attached to laws, norms or sanctions bring about pressure for adjustment in the organizational field. The normative pillar is conditioned to certification and accreditation. As pointed out by Scott: "These beliefs are not simply anticipations or predictions, but prescriptions-normative expectations of how specified actors are supposed to behave" (p.55)[15]. Last but not least, the cognitive system is related to common beliefs and shared logic and is supported by culture.

Thus, institutional theory is concerned with aspects of social structure, reflecting on the processes by which structures – schemes, rules, norms and routines – are set as guidelines for social behavior [15]. Avgerou [1] suggested that new institutionalism provides a conceptual platform to analyze actions resulting from cultural processes and from the power underlying organizations and their social environment.

2.1 Institutions and Organizations

DiMaggio and Powell [6] questioned what makes organizations so similar to one another. For them, institutions in a given organizational field become homogenous in an effort to get legitimacy through isomorphism. The authors identified three mechanisms from which isomorphical institutional changes take place: coercive isomorphism, mimetic isomorphism, and normative isomorphism. As far as the adoption of technology is concerned, there is a tendency for similarity through different isomorphisms.

One of the main propositions in institutional analysis is that organizations tend to be grouped together in fields and each field tend to develop similar structures and processes [1]. DiMaggio and Powell [6] define organizational field in institutional analysis as organizations which form a recognized area and undergo a process of homogeneity through isomorphism in order to become legitimate. This is a strong tendency for public organizations, which need to be legitimate to remain active in government, to share some similarities in structures and services.

As pointed out before, DiMaggio and Powell [6] identified three mechanisms according to which institutional isomorphic changes occur: coercive isomorphism, which derives from political influences, mimetic isomorphism, which results from models of other organizations, and normative isomorphism, associated with professionalization.

According to the authors, coercive isomorphism results from formal and informal pressures by organizations on which others in the same field depend, providing legitimacy to organizational structures, to their processes and results. Avgerou [1] adds that government mandates and legal systems in regional, national and international organizational contexts constitute forms of coercive pressure, and rules are the mechanism which determines structures and processes in the public sector.

Avgerou [1] states that normative pressures refer to the effects of professional practice. DiMaggio and Powell [6] point out that an important aspect of professionalization, which provides isomorphism, is the support to formal education and the legitimacy provided by a cognitive basis coming from university specialists. They argue that normative mechanisms generate groups that occupy a similar position in the organization and share similarities in terms of orientation and control [6].

Mimetic mechanisms are defined by Avgerou [1] as the acquisition of structural and process characteristics from successful organization models. DiMaggio and Powel [6] believe that mimetic mechanisms can arise due to uncertainties resulting from the lack of understanding of organizational technologies taking other organizations as models. The authors claim that homogeneity in organizational structures derives from active search for models like the ones belonging to older organizations.

2.2 Governance

Following Bresser-Pereira [3], managerial public administration has come to existence at the end of the 20th century with the challenge to make the public sector more efficient and transparent to society. According to Diniz et al. [7], the use of IT has made a change in the model of public management possible with the arising of e-Government. This challenge for public organizations to remain in a complex and dynamic environment has driven organizations to adopt models focused on governance principles that ensure a more transparent result based management. The need for transparency and for results has emerged from environment pressure that public organizations should consider issues like efficiency, efficacy, transparency, and mechanisms of control and accounts of government. In order to do so, it is necessary for such organizations to adopt ICT resources as essential tools to strengthen governance and transparency in public organizations [2].

2.3 Electronic Governance

The use of ICT in the public sector, which used to be called electronic government in 1990, is now referred to as electronic governance or e-Government since it encompasses broader concepts like, for example, the application of ICT in public governance [5; 2]. According to Barbosa et al. [2], there are currently other IT applications to be considered besides the access to public services on the internet like, for instance, improvement of administrative processes, increase in efficiency, control of public policies, integration between governments and electronic democracy.

Electronic governance comprises the use of IT not only for improving management of resources and governmental processes (public e-Administration) but also for upgrading citizens e-Services and for increasing citizens democratic participation in governments practices (e-Democracy) [5].

2.3.1 Electronic Democracy

Electronic democracy is concerned with a more interactive environment, creating opportunities for cooperation between citizens and social groups and, therefore, increasing political participation in decision-making processes [10]. For Frey [10], the governmental sector must have an active role in devising electronic governance practices meant to freshen up democracy. Furthermore, discussion forums should approach topics related to citizens' real life problems in order to make them engage in democratic practice.

Digital forms of participation are mapped by Pell [14], who relates electronic democracy practices with information, enquiries and deliberation baselines. As far as baseline information is concerned, Pell [14] makes reference to web sites, search engines, data bases and online discussion forums. On web search queries there are e-mails, referendums, electronic enquiries and electronic petitions. As for baseline deliberation, there are discussion groups, teleconferences, and community pages on the web. According to Pell, digital technologies can increase the number and the mode of such participation methods even further.

3. METHODOLOGY

This is a qualitative research which aims to understand an issue by examining a case study. Flick [9] states that in qualitative research there is a mutual interdependence of isolated parts in the process and, therefore, it is not possible to regard research stages as linear but rather continuous and related to one another.

The research strategy chosen here is case study since it is our goal to focus on the study of a specific phenomenon, as pointed out by Eisenhardt [8]. The case was selected following Flick [9]'s criteria in the sense that a particularly typical single instance was chosen and analyzed consistently before any comparative analysis was carried out.

Primary data will be collected during field research for investigating different facets of the case study. Then semi-structured interviews with different stakeholders and the main actors involved in the implementation of the web portal will be conducted. Another research tool that will be used is document analysis since documents can provide important information to corroborate research results.

The current research is still getting under way. A preliminary theoretical study has been made and an interview with the executive coordinator of the Digital Cabinet was conducted in December 2011.

Table 1: Theoretical propositions

Proposition P1:	Public organizations dependent on funding and on political influence are coerced into implementing e-Democracy practices due to coercive pressures
Proposition P1a:	Political influence and retention of funds by dominant organizations have an impact on coercive pressure for the implementation of e-Democracy practices by dependent public organizations.
Proposition P2:	Public organizations which need acceptance in their organizational field tend to implement e-Democracy practices due to normative pressure.
Proposition P2a:	The existence of a desired behavior in the organizational environment reflects in normative pressure for the implementation of e-Democracy practices in public organizations.
Proposition P3:	Public organizations that need legitimacy tend to use successful models in the implementation of e-Democracy practices due to mimetic pressure.
Proposition P3a:	The existence of successful models of e-Democracy practices in organizational environment result in mimetic pressure on the implementation of such practices by public organizations.

4. CONCEPTUAL MODEL

On the basis of the theoretical framework adopted in this research, a conceptual model and some propositions were defined with the aim to analyze the influence of institutional pressures on the implementation of e-democracy.
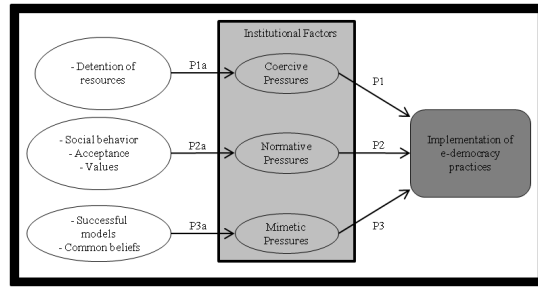

Figure 1: Conceptual model

5. THE DIGITAL CABINET: AN INTRODUCTION TO THE CASE

The Digital Cabinet is the web portal to the State Government of Rio Grande do Sul (Brazil). It follows the concept of e-Democracy since it is characterized as a means of citizen engagement and participation. It is, as stated in the web portal (2011), "a space for participation which aims to encourage a new culture of governance in the public sector by creating new channels of communication and cooperation with society through the use of digital tools". It started operating in 2011 and has four tools: "Governor listens", "Collaborative Agenda", "Governor answers" and "Governor asks".

The tool "Governor listens" offers public hearings on the Internet for citizens to participate and chat with the government. The "Collaborative Agenda" consists in contributions from citizen members to bring issues forward and help make the governor's agenda on his visits to the countryside. The tool "Governor answers" constitute an environment in which members of the public can ask questions to the Governor and choose by vote a question they want to have answered on a video at the end of each month. Finally, "Governor asks" is a tool through which the Governor puts forward a given topic and citizens are asked to discuss it and give their contribution to the discussion of important local issues. The authors of the most voted contributions meet the governor personally and debate the topics with him.

5.1 The Institutional Perspective of the Digital Cabinet

The initiative of creating the Digital Cabinet, according to its executive coordinator, Mr. Fabricio Solagno, follows similar experiences around the world, especially in Obama's government in the US and in Canada. There are also reports of a similar experience by the Secretary for Communications in Ceará, Brazil. One of the main differences between the Digital Cabinet in Rio Grande do Sul (RS) and similar initiatives in Brazil is that participation tools are managed by Secretaries for Communications, which is not the case in RS. As pointed out by Solagno, "we are inside the Governor's cabinet and that's where all decision-making comes from".

Evidence shows that cognitive factors affect the implementation of e-Democracy practices. The cognitive pillar can be observed in the existence of a common sense on the benefits of creating a web

portal for organized public participation in view of the legitimate experience of other successful web portals. The influence of web portals from other countries, for instance, the USA, was thus identified as a positive model to be followed and adapted to different demands.

6. CONCLUDING REMARKS

Considering the present situation of web collaboration, e-Democracy practices tend to be a requirement for new forms of government in order to meet the demands of contemporary society. Collaboration in e-Democracy digital environments can be seen as a gain not only for the population, which looks for ways of effective participation, but also for governments that expect to achieve legitimacy and recognition in the web.

This paper reports a research in progress and, therefore, it is not meant to present an analysis of the case. It has been possible, however, to establish directives for further reflections on the matter. The first directive refers to the peculiarity of this case study, in special to its structuring (being inside the Governor's Cabinet), which being examined in the light of Institutional Theory, can shed light into important questions. A second aspect to be explored concerns the limitations of national and international cases of collaboration in government virtual environments and the effective participation of citizen in public decision-making. Limited experiences entail a specific and peculiar outlining to cultural, social, and political conditions. Once again Institutional Theory can be proved useful as a guideline to analysis. In the analysis of the only interview that has been carried out so far, it is possible to identify some influence of mimetic pressures in the implementation of e-Democracy practices which will be corroborated in a further stage of this research.

7. ACKNOWLEDGMENTS

8. REFERENCES

[1] Avgerou, C. 2002. *Information systems and global diversity*. Oxford University Press, New York.

[2] Barbosa, A. F.; Faria, F. I.; Pinto, S. L. 2007. Governança eletrônica no setor público. *In*: Knight, P. T.; Fernandes, C. C. C.; Cunha, M. A. (Orgs). *e-Desenvolvimento no Brasil e no mundo: subsídios e Programa e-Brasil*. São Caetano do Sul: Yendis Editora.

[3] Bresser-Pereira, L. C. B. 2002. Reforma da nova gestão pública: agora na agenda da América Latina, no entanto... *Revista do Serviço Público*, 53,1.

[4] Castells, M. 2000. *A The Rise of the Network Society:* The Information Age: Economy, Society, and Culture Volume I (Information Age Series), Wiley-Blackwell; 2nd edition.

[5] Cunha, M. A.; Annenberg, D.; Agune, R. M. (Prestação de serviços públicos eletrônicos ao cidadão. *In*: Knight, P. T.; Fernandes, C. C. C.; Cunha, M. A. (Orgs). 2007. *e-Desenvolvimento no Brasil e no mundo:* subsídios e Programa e-Brasil. São Caetano do Sul: Yendis Editora.

[6] Dimaggio, P. J.; Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 2, p.147-160.

[7] Diniz, E. H.; Barbosa, A. F.; Junqueira, A. R. B.; Prado, O. 2009. O governo eletrônico no Brasil: perspectiva histórica a partir de um modelo estruturado de análise. *Revista de Administração Pública* (RAP), Rio de Janeiro, 43, 1, p.23-48.

[8] Eisenhardt, K. M. 1989. Building Theories from Case Study Research. *Academy of Management Review*, 14, 4, p.532-550.

[9] Flick, U. 1998. *An introduction to qualitative research*. London: Sage.

[10] Frey, K. 2009. Perspectivas da democracia local na era digital. In: Cunha, M. A. V. C.; Frey, K.; Duarte, F. (Orgs.). *Governança local e tecnologias da informação e comunicaç*o. 1. ed. Curitiba: Champagnat.

[11] Gil-Garcia, J. & Luana-Reyes, L. 2006. *Encyclopedia of E-Commerce, E-Government and Mobile Commerce*. IDEA Group Reference.

[12] Heeks, R.; Bailur, S. 2007. Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice. *Government Information Quarterly*, 24, p.243-265.

[13] King, J. L.; Gurbaxani, V.; Kraemer, K. L.; McFarlan, F. W., Raman, K. S.; Yap, C. S. 1994. Institutional Factors in Information Technology Innovation. *Information Systems Research*, 5, 2, p.139-169.

[14] Peel, D. 2009. Utilizando tecnologias digitais para a ampliação da participação pública no planejamento. In: Cunha, M. A. V. C.; Frey, K.; Duarte, F. (Orgs.). *Governança local e tecnologias da informação e comunicação*. 1. ed. Curitiba: Champagnat.

[15] Rodriguez, C. L.; Diniz, E. H.; Ferrer, F. 2007. Influência governamental e estratégias institucionais na difusão de inovações em economias emergentes. *Revista de Administração de Empresas* (RAE), 47, 1, p.10-21.

[16] Scott, W. R. Institutional theory P408-14 In: *Encyclopedia of Social Theory*, George Ritzer, ed. Thousand Oaks, CA: Sage, 2004.

[17] Scott, W. R. 2008. *Institutions and organizations: ideas and interests*. 3. ed. Thousand Oaks: Sage.