Does E-Governance Enhance Trust in Government?

Amitabh Ojha[1]* and M. P. Gupta[1]

ABSTRACT

While research has more or less established the fact that e-governance brings in certain level of transparency apart from efficiency and also offers good scope for innovative ways of servicing, but does it eventually lead to enhanced trust of people in government. The aim of this paper is to articulate the issues underlying trust, particularly trust in government, summarize the current state of knowledge with regard to the relationship between e-governance and trust, and identify the directions that future research should take. From our review of existing literature on e-gov and trust in government, it emerges that the current empirical evidence on the relationship between e-gov and trust in government is too little to permit a robust conclusion, although at the outset it appears obvious that such a relationship should exist. Further, while research on trust at government level is indeed useful, this should be supplemented by research on trust at the level of government agency.

Keywords: Trust, E-government, Satisfaction

1. Introduction

While the desirability of organizations and individuals to be able to trust organizations/individuals is generally well accepted, considerable confusion prevails with regard to the conceptualization and definition of Trust. This is due to the fact that Trust is a complex construct and it has been variously conceptualized by scholars, from the lenses of their respective disciplines (principally psychology, sociology and economics). It is therefore necessary to dwell on the conceptualization and definitions of Trust.

Psychologists from the personality theory stream have conceptualized trust as a psychological construct or trait that individuals develop in varying degrees, depending on their personal experiences and prior socialization (Lewis & Weigert, 1985). This stream frames its assessments of trust in terms of attributes of trustors and trustees (Rousseau et al., 1998). Yet another conceptualization of Trust from the psychology stream is by behavioral psychologists who study behavioral trust in laboratory experiments, particularly the "prisoner's dilemma" (PD) game (Lewis & Weigert, 1985). In this stream of research, trust has been treated as co-operation and the effort is to determine the situational factors affecting Trust.

With regard to the conceptualization of trust in sociology, Rousseau et al. (1998) note that sociologists often find trust in socially embedded properties of relationships among people (Granovetter, 1985) or institutions (Zucker, 1986). Lewis & Weigert (1985) observe that trust is applicable to the relations among people rather than to their psychological states taken individually; the primary function of trust is

---

[1] Department of Management Studies, Indian Institute of Technology Delhi, New Delhi, India
* *Corresponding Author:* (Email: amitabhojha@rediffmail.com, Telephone: +91-11-26596407)

sociological rather than psychological; the bases on which trust rests, are sociological; and trust has distinct cognitive, emotional, and behavioral dimensions which are merged into a unitary social experience.

Williamson (1993) is a treatment of trust from an economics perspective. His key prescriptions are: (1) Economic exchanges are calculative in nature and the term 'Trust' should not be used in such (calculative) contexts; (2) The term 'Risk' really belongs to calculative contexts and it should not be used interchangeably for 'Trust'; (3) The term 'Trust' should be reserved for non-calculative personal relations (and, possibly in a hyphenated form, to describe differences in the institutional environment).

Table 1 lists definitions of Trust from some frequently cited works. The definition proposed by Mayer et al. (1995) integrates two key issues: (1) the presence of risk, and (2) a reason or purpose for undergoing that risk. Hosmer (1995) synthesizes his trust definition from philosophic ethics and organization theory.

Table 1: Definitions of Trust

Source	Definition of Trust
Mayer et al. (1995)	The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party.
Rousseau et al. (1998)	Trust is a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another.
Hosmer (1995)	Trust is the expectation by one person, group, or firm of ethically justifiable behavior - that is, morally correct decisions and actions based upon ethical principles of analysis - on the part of the other person, group, or firm in a joint endeavor or economic exchange.
Rotter (1967) cited in Mayer et al. (1995)	Expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon.
Deutsch (1958)	An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation leads to behavior which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed.
Lewis & Weigert (1985)	Trust exists in a social system insofar as the members of that system act according to and are secure in the expected futures constituted by the presence of each other or their symbolic representations.

The definition suggested by Rousseau et al. (1998) is based on their review of a set of contemporary and cross disciplinary writings on Trust and represents a commonly held view of Trust, cutting across disciplines. While the foregoing definitions are the result of integrative works on trust, the definitions proposed by Rotter (1967), Deutsch (1958), and Lewis & Weigert (1985) are rooted in specific disciplines. The definition given by Rotter (1967) represents the personality theory stream of psychology, Deutsch (1958)'s definition represents the behavioral psychology stream, and the definition provided by Lewis & Weigert (1985), which is inspired by Barber (1983), represents the sociological perspective.

2. Political Trust
The term Political Trust implies trust in government and is rooted in the discipline of Political Science. There is a rich body of literature on political trust, the context of which is largely the U.S, which voices a general concern that public trust in government is on decline. It is therefore of interest to examine how the scholars from the Political Science discipline have defined Trust. Levi & Stoker (2000) note that there are two approaches to defining trustworthiness of government. The first of these approaches, which has been used in survey research, bases the definition on characteristics that are morally entailed by the role that the political actor has assumed; the following definition proposed by Miller & Listhaug (1990) is an example of it:

"Trust reflects evaluations of whether or not political authorities and institutions are performing in accordance with the normative expectations held by the public. Citizen expectations of how government should operate include, among other criteria, that it be fair, equitable, honest, efficient and responsive to society's needs. In brief, an expression of trust in government (or synonymously political confidence and support) is a summary judgement that the system is responsive and will do what is right even in the absence of constant scrutiny."

The second approach focuses on whether the potential trustor thinks that the political actor or institution will act in his interest; this approach has not been used in survey research.

With regard to the antecedents of political trust, a frequently cited work is that of Cole (1973) which investigated three broad category of causes of political trust as suggested in literature: *socioeconomic factors*, *personality variables*, and *political efficacy measure*. Political Efficacy refers to the feeling that an individual can have an impact upon the political process. Based on the U.S national SRC data for the years 1964, 1968, and 1970, this research found that socioeconomic factors failed to directly affect political trust. However, education displayed strong indirect paths (by way of political efficacy) in all models even though the magnitude of that link continually declined in the case of blacks. The path between the personality measures and political trust was reduced to insignificance in both models by 1970, and the dominant path, particularly in the case of whites, is that between political efficacy and political trust. The political trust causal model proposed by Cole (1973) explains maximum 17% variance in political trust, and therefore further causal factors need to be identified. Further, there is support in literature for a relationship between Political Trust and whether the party in power is the one that the respondent (citizen) identifies with (Lambert et al., 1986; Levi & Stoker, 2000). Besides, the other causal factors of political trust appearing in literature are economic (citizens' evaluations of the economy and the resulting trust/distrust), socio-cultural (crime rates, child poverty), and political (citizen evaluations of incumbents and institutions) (Chanley et al., 2000).

The importance of political trust and the consequences of citizen trust/distrust have been underlined by several scholars. Aberbach & Walker (1970) have held that leaders in a representative democracy cannot be successful until they have gained the trust of the citizens and have emphasized that this is even more important in American society where racial and ethnic minorities are actively searching for a new, more dignified role as political equals. Miller (1974) has observed that extensive periods of high political discontent imply that needs among certain segments of the population are not being met; their discontent is thus an indicator of dissatisfaction with the quality of life they are experiencing. While referring to the literature on regulation, Levi & Stoker (2000) state that the more trustworthy a citizen perceives the government to be, the more likely he is to comply with its regulatory and other requirements. The serious implications of a distrusting populace suggests that governments should be mindful of the pulse of the public and work on strategies as would help improve their level of trust.

3. Public Trust in a Government Agency

Public trust in government (the term here refers to a homogeneous or overarching view of government, rather than an individual agency) has been extensively investigated in U.S contexts, albeit the general limitation of those researches is that trust has been measured on the basis of (National Election Studies) NES trust-in-government questions (or variants thereof). In contrast, issues concerning public trust in an individual government agency and its employees has received the attention of only a few scholars.

In a relatively recent work, Kim (2005) has addressed a fundamental issue of trust in the modern administrative state: reconciling the need for political accountability of government and its employees and the growing demand for discretionary power to create a flexible administration. To answer this research

question, Kim has proposed a conceptual model of public trust in government agencies. In this model, *credible commitment*, *benevolence*, *honesty*, *competency*, and *fairness* have been proposed as the dimensions of perceived trustworthiness of a government agency. In this work, Kim has also reviewed the contingent consent model of Levi (1998), the only other model touching upon institution-level (government context) trustworthiness, and has pointed to two main shortcomings thereof: (1) it is not clear how the trustworthiness of government actually results in citizen compliance; (2) the model does not sufficiently reflect the role of government employees. Thomas (1998) is another related work which addresses the question of creating, maintaining, or restoring public trust in a government agency and its employees. While keeping government agencies and their employees in context, this work delineates the *fiduciary*, *mutual* and *social* conceptions of trust, the *characteristic*, *process*, and *institutional* based modes of trust building, and the process of maintenance and loss of trust.

From the preceding discussion, it is clear that public trust in individual government agency (micro level) is an area where theory development work has been sparse and empirical studies are required for testing and advancing the present theories. Also, the progressive trend of governments switching to E-Gov for public service delivery, necessitates the re-definition or suitable adaptation of the existing theoretical work on conceptualization, production, process of maintenance and loss of trust in government agencies. This is required for theory based empirical studies on public trust in government agencies in the E-Gov settings.

4. Satisfaction with a government agency and Trust in government
Research on satisfaction and trust in an individual government agency is of course useful for its own sake. But an important linked question is whether these results can predict trust in government (as a whole). In a conceptual paper, Walle & Bouckaert (2003) deal with this question in some detail and following are their findings as relevant to the present discussion: (1) Trust in government is not a simple arithmetical sum of trust in agencies because certain agencies may have greater impact than others; (2) The relative importance of agencies has a temporal dimension and is dependent on individual judgement; and (3) Besides the performance of government agencies, there are other factors e.g political, which could influence the level of trust in government.

5. E-Gov - Trust Relation
It is widely held that E-gov has the potential to improve government transparency, availability, accessibility, and responsiveness. Nye (1997) has suggested that revolution in information technology may help government get closer to people, an outcome which could result in higher citizen confidence in government. It is therefore reasonable to speculate that well designed and efficiently functioning e-gov sites can help resurrect citizens' and businesses' trust in government. This speculation has triggered studies, albeit few, which attempt to test the expected relationship between e-gov and citizens' trust in government.

Based on U.S survey data from *Council for Excellence in Government*, Welch, Hinnant, & Moon (2005) found that government Web site use is positively associated with e-government satisfaction and Web site satisfaction and that e-government satisfaction is positively associated with trust in government. Parent, Vandebeek, & Gemino (2005) surveyed a sample of Canadian voters and found that use of internet to transact with the government had a significantly positive impact on trust and external political efficacy (or perceived government responsiveness). While the results reported in these two studies are on the expected lines, the work of Tolbert & Mossberger (2006) has resulted in findings which at least in part are counter-intuitive. Tolbert & Mossberger have used cross sectional U.S data collected by the Pew Survey, to examine the relationship between e-gov use, attitudes about e-gov, and trust in government at the federal, state, and local levels. Their key findings are: (1) Perceptions of improved government transparency, accessibility, and responsiveness (through use of federal government e-gov sites) are not statistically related to general trust in federal government; and (2) Perceptions of improved government responsiveness

(through use of local government e-gov sites) is statistically related to general trust in local government.

The common feature of these three empirical studies is that the unit of observation and analysis is the citizen, e-gov use is (apparently) voluntary, and trust has been considered at government level (federal, state, or local), rather than at the level of any particular government agency. While studies of trust in government at an aggregate level provide macro level indications of pulse of the public, however agency level data on E-Gov and trust could be of further help at least for two reasons: (1) in many countries, the ministries/departments of federal or state governments operate like silos; and (2) targeting and improving the E-gov initiatives of select high impact government agencies where trust may be at unacceptably low levels, can be an effective strategy where funds and other resources are limited. Besides, there could be certain E-gov services wherein the government mandates or makes compulsory their use. In such mandatory E-Gov services, data on usage of E-gov takes on an exogenous character and it no longer has predictive ability with respect to any endogenous variable; interestingly, scenarios like this stand in complete contrast to the typical domains of application of Technology Acceptance Model (Davis, 1989; Davis et al., 1989), where *usage* is an endogenous variable. So, research should also address trust in the context of mandatory e-gov services where perhaps satisfaction (in place of usage) would be the variable to focus on. Restoration of public's trust in government is indeed a million dollar question for the e-gov community and research needs to address this question with a sense of urgency.

References

1. Aberbach, J. D., & Walker, J. L. (1970). Political Trust and Racial Ideology. *The American Political Science Review*, 64(4), 1199-1219.
2. Barber, B. (1983). *The logic and limits of trust.* Rutgers University Press.
3. Chanley, V. A., Rudolph, T. J., & Rahn, W. M. (2000). The Origins and Consequences of Public Trust in Government: A Time Series Analysis. *The Public Opinion Quarterly*, *64(3)*, 239-256.
4. Cole, R. L. (1973). Toward a Model of Political Trust: A Causal Analysis. *American Journal of Political Science*, *17(4),* 809-817.
5. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13(3)*, 319-340.
6. Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, *35(8)*, 982-1003.
7. Deutsch, M. (1958). Trust and Suspicion. *The Journal of Conflict Resolution, 2(4)*, 265-79.
8. Granovetter, M. S. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, *91(3)*, 481-510.
9. Hosmer, L. T. (1995). Trust: The Connecting Link between Organizational Theory and Philosophical Ethics. *The Academy of Management Review*, *20(2)*, 379-403.
10. Kim, S. E. (2005). The Role of Trust in the Modern Administrative State: An Integrative Model. *Administration & Society*, *37(5)*, 611-635.
11. Lambert, R. D., Curtis, J. E., Brown, S. D., & Kay, B. J. (1986). Effects of Identification with Governing Parties on Feelings of Political Efficacy and Trust. *Canadian Journal of Political Science*, *19(4)*, 705-728.
12. Levi, M. (1998). A state of trust. In A. Braithwaite and M. Levi (Eds.). *Trust and Governance*. New York: Russel Sage.
13. Levi, M., & Stoker, L. (2000). Political Trust and Trustworthiness. *Annual Review of Political Science*, *3*, 475-507.
14. Lewis, J. D., & Weigert, A. (1985). Trust as a Social Reality. *Social Forces*, *63(4)*, 967-985.
15. Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review*, *20(3)*, 709-734.
16. Miller, A. H. (1974). Political Issues and Trust in Government: 1964-1970. *The American Political Science Review*, *68(3)*, 951-972.
17. Miller, A. H., & Listhaug, O. (1990). Political Parties and Confidence in Government: A Comparison of Norway, Sweden and the United States. *British Journal of Political Science*, *20(3)*, 357-386.
18. Nye, Joseph S., Jr. (1997). In Government We Don't Trust. *Foreign Policy*, *108*, 99-111.
19. Parent, M., Vandebeek, C. A., & Gemino, A. C. (2005). Building Citizen Trust through e-Government.

Government Information Quarterly, *22*, 720-736.

20. Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, *35*, 651-665.

21. Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A Cross-Discipline View of Trust. *The Academy of Management Review*, *23(3)*, 393-404.

22. Thomas, C. W. (1998). Maintaining and restoring public trust in government agencies and their employees. *Administration & Society*, *30(2)*, 166-193.

23. Tolbert, C. J., & Mossberger, K. (2006). The Effects of E-Government on Trust and Confidence in Government. *Public Administration Review*, *66(3)*, 354-369.

24. Walle, Steven van de, & Bouckaert (2003). Public Service Performance and Trust in Government: The Problem of Causality. *International Journal of Public Administration*, *26(8 & 9)*, 891-913.

25. Welch, Eric W., Hinnant, Charles. C., & Moon, M. Jae (2005). Linking Citizen Satisfaction with E-Government and Trust in Government. *Journal of Public Administration Research and Theory*, *15(3)*, 371-391.

26. Williamson, O. E. (1993). Calculativeness, Trust, and Economic Organization. *Journal of Law and Economics*, *36(1)*, 453-486.

27. Zucker, L. G. (1986). Production of trust: Institutional sources of economic structure, 1840-1920. In B. M. Staw & L. L. Cummings (Eds.). *Research in organizational behavior*, *8*, 53-111. Greenwich, CT: JAI Press.

About the Authors

Amitabh Ojha is a senior officer with the Indian Railways and currently on leave to Indian Institute of Technology Delhi for his Doctoral Studies. He graduated in Electrical Engineering in 1983 with Gold Medal from Motilal Nehru National Institute of Technology, Allahabad. He also holds a Master of Technology (Software Engineering) from the same institute. His current research endeavour is concentrated on understanding the nature of relationship between trust and e-governance.

M.P.Gupta is Chair-Information Systems Group & Coordinator-Center for Excellence in E-gov at the Department of Management Studies, Indian Institute of Technology (IIT Delhi). His research interests lie in the areas of IS/ IT planning and E-government. Prof.. Gupta has authored the acclaimed book "Government Online" and edited two others entitled "Towards E-Government" and "Promise of E-Government", published by McGraw Hill, 2005. His research papers have appeared in National and International Journals/Conference Proceedings. He was the recipient of the prestigious Humanities & Social Sciences (HSS) fellowship of Shastri Indo Canadian Institute, Calgary (Canada) and a Visiting Fellow at the University of Manitoba. He supervised e-government portal "Gram Prabhat" which won the IBM Great Mind Challenge Award for the year 2003. He has steered several seminars and also founded the International Conference on E-governance (ICEG) in 2003 which is running into its sixth year. He is on the jury of Computer Society of India (CSI) E-gov Awards and also a member of Program Committee of several International Conferences. He is life member of Global Institute of Flexible Systems Management (GIFT), Systems Society of India (SSI) and Computer Society of India (CSI).