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Interaction of Continuity and Change Forces and E-government Performance: An Empirical Study

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Abstract

Continuity and Change forces have traditionally been hailed as mutually exclusive. Of late there is a growing interest in the concept of 'confluence of continuity and change' i.e. managing continuity and change simultaneously. In fact, researchers across domains have highlighted the need for managing both concurrently as a means to better performance. E-government, as a domain, has witnessed tremendous action over the past decades and is subject to continual change, yet it is fraught with continuity issues like pre-existing culture, mindset, and delivery mechanisms which come in the way of effective change, resulting in dismal performance.

This paper is an attempt to empirically demonstrate that managing continuity and change forces simultaneously (i.e. their interaction) results in better delivery of strategic deliverables of e-government projects, than when managed separately. For this the relationship between the interaction of continuity and change forces affecting e-government projects is tested for possible impact on their performance. Results indicate a positive linkage, thus, calling for a flexible approach to strategically manage continuity and change forces for better outcomes.

Keywords: Continuity, Change, Confluence, E-government, Flexible strategy, Interaction, Performance.

Introduction

Organizations, in general and government in particular, focus overwhelmingly on 'change and transformation', given the immense pressure of keeping pace with the environment. However, despite the unprecedented focus on change, the record of change success is startlingly low, both in business organizations (Kotter, 1995; Beer and Nohria, 2000) as well as in the context of e-government projects (Heeks, 2003; Ruth and Doh, 2007). This has led the researchers to explore alternatives beneath and beyond change (Sturdy and Grey, 2003).

Researchers reviewing literature on organizational change have highlighted the fact that 'managing change is invariably managing paradoxes' (Nasim and Sushil, 2011). Various researchers have suggested ways to manage such dualities and paradoxes for enhancing change outcomes. One such approach that has gained considerable acceptance, indicate the need for 'managing continuity and change concurrently' for effective change (Brown and Eisenhardt, 1997; Huy, 2002; Leana and Barry, 2000; Sturdy and Grey, 2003; Sushil, 2005; Graetz and Smith, 2009). Further, despite the emphasis by researchers on managing such paradoxes/dualities, there hardly

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exists any empirical validation of the suggested notions (By, 2005).

The context of e-government, too, seems highly paradoxical. On one hand, in order to keep pace with the changing environment, the domain of e-government calls for radical changes embracing new technologies and processes. While 'government'- as an entity, on the other hand, is largely driven by rules, norms and laws which strengthens the forces of continuity. This led the researchers to explore the e-government domain from the dual perspective of continuity and change. In fact, based on expert's opinion survey, researchers have concluded that this domain is highly affected by both continuity and change forces and have even identified these forces (Nasim and Sushil, 2010). Further, a study has also highlighted the structural relationships among these forces, and has even suggested their linkages with the performance factors (Nasim, 2011).

This paper is an attempt to empirically demonstrate that managing continuity and change forces simultaneously (i.e. their interaction) will result in better delivery of strategic deliverables of e-government projects, than when managed separately. At the outset, a brief review of background literature introducing the strategic new approach is presented, followed by the details of the methodology undertaken for the empirical analysis. The results of the empirical survey are then discussed, followed by the concluding section highlighting the implications for both the academics as well as the practitioners.

Background Literature

Discourses on strategy has traditionally hailed 'Continuity and change' as mutually exclusive i.e. as either–or situation. However, in the last two decades, the waves of change have compelled businesses to evolve a more 'flexible approach' (Volberda, 1998; Sushil 2000) for managing change and transformation. Evidences from the literature, further, prove that if everything about an organization would change it would lead to chaos. Hence, it is imperative to know what needs to be retained and what should be changed. This has led to a greater acceptance of the notion of managing both change and continuity together.

The concept of managing 'continuity and change' was popularized in 1994 when Collins and Porras stated in their famous book '*Built to Last*' that the "ability to manage continuity and change is the secret to an enduring great company". Other researchers, too, agreed that continuity and change co-exist in the organization and that it should be managed not as alternative states but as co-existent ones (Leana and Barry, 2000; Sturdy and Grey, 2003). Thus, it was posited that while managing change is inevitable, it is also imperative for managers today to embrace stability and learn to manage continuity if they want to survive.

Though hosts of management writers emphasized the need for managing 'change and continuity', very few of them actually attempted to present a framework for doing so. One of the earliest thinking on 'reconciling change and continuity' in strategy making is provided by Mintzberg (1988). In his excerpts on "Crafting Strategy" he proposed that the reconciliation between change and continuity forces should be done alternatively, a departure from the current thinking calling for concurrent management of the forces.

Volberda's (1997) has highlighted the need of an organization to manage change and continuity simultaneously by emphasizing the need for flexibility. An inductive model to resolve the tension between continuity and change at the micro/individual level has been proposed by Huy (2002). The 'Flowing Stream Strategy framework' for managing continuity and change, propounded by Sushil (2005), provides a detailed approach to "consciously manage the vital and desirable areas of continuity along with change'. Burchell and Kolb's (2006) model based on 'Systems thinking', too, emphasized the need for change and stability to create sustainable organizations

for future. Of late, Graetz and Smith (2009) have proposed a 'dualities aware perspective' as a potential way forward in balancing the contradictory forces of continuity and change.

Managing Change and Continuity in E-Government

'E-government' or 'electronic government' refers to the delivery of information and services by government online leading to better and effective governance (Ebrahim and Irani, 2005; Beynon-Davies, 2007). ICT, in general, and Internet in particular, has subjected the domain of e-government to continual change (Stojanovic *et al.,* 2006). However, despite the focus on change, e-government projects have not delivered, especially in the context of developing countries which are grappling with a dismal percentage (15-17%) of success (Heeks, 2003). The intra-governmental changes have been slow, ad hoc and plagued by poor planning, inadequate application of strategic management principles, and weak leadership (Moon, 2002).

Researchers worldwide have consistently highlighted that e-government is more of an organizational change issue than a technological one (Li, 2003; Gupta *et al*., 200). India, despite being recognized as a leading power in information technology, has a poor e-government index. With massive investments made by the government in these projects and with dismal success rate (15-17%) (World Bank, 2004; Suri, 2005), it is imperative to explore approaches that may enhance the outcomes of such projects.

Continuity and Change Forces in E-Government

Of late researches in e-government in Indian context not only suggest the significance of managing change in the domain (Kumar, 2007; Suri, 2009), but also highlight the need for managing continuity forces like culture etc. Further, a comprehensive review of e-government literature undertaken by researchers, with the objective of identifying change and continuity forces, resulted in seven forces of change (*Globalization, New Opportunities, Pressures of Good Governance, Stakeholders' Needs and Expectations, New Technology, The E-platform, Government Policies and Legislation, and Public-Private Partnership)* and five forces of continuity (*Large Number and Heterogeneity of Citizen Base, Established Traditional Infrastructure, Existing Process of Service Delivery, Legacy Databases and Existing Culture)* (Nasim and Sushil, 2010).

These change and continuity forces are further used as predictor variables for assessing the impact of their interaction on e-government performance, as reported in this research paper. A detailed explanation of these forces and their references is provided in Appendix-1.

Methodology

This paper adopts the empirical methodology to validate the research proposition that managing 'continuity and change' simultaneously yields better results. A questionnaire based opinion survey has been undertaken in the context of select e-government projects to investigate the relationship between the constructs of managing continuity and change and the strategic deliverables of e-government projects. The questionnaire draws from the literature the predetermined continuity and change forces affecting e-government domain in India and is administered to the planners and implementers of a variety of Government-to-Citizen (G2C) projects in operation in India. The questionnaire consists of statements on managing continuity and change forces and strategic factors comprising of performance variables from project and citizen's perspectives. A five point Likert scale is used to elicit response from the respondents and the questionnaire has been duly tested for its reliability and validity as a part of the doctoral research (Nasim, 2010). The details of the questionnaire used for the study reported in this paper are provided in the Appendix-2. The basic methodological approach adopted for the empirical survey method undertaken for the study is briefly presented in Table 1.

Table 1: Research Framework for Opinion Survey Method Adopted for the Study

Perspective of the Opinion Survey	Research context/domain	Research variables investigated	Survey Instrument Used	Unit of analysis	Sample size
OPINION SURVEY Service provider (Planners and implementers) perspective	Government-to-citizen (G2C) projects operational in India	• All macro and micro research variables • Impact of managing change and continuity on project and citizen related performance factors	Questionnaire based	Planners and implementers involved in the select G2C projects in India	131

The results of the survey are then analyzed to determine the impact of managing change and continuity forces, separately as well as simultaneously, on the strategic factors or performance factors of e-government projects. To test the simultaneous impact of managing change and continuity forces, the interaction or the product of the significant continuity and change forces are tested. A detailed insight into the research constructs, research propositions and the sample e-government projects is provided in this section for better clarity about the methodology of the study.

Research Constructs

As drawn from strategy, change management and e-government literature, three broad sets of research constructs namely-Forces of change, Forces of continuity, and Strategic factors of e-government projects- have been identified. A brief explanation of these macro constructs may be presented as follows:

Forces of Change

'Forces of Change' typically refer to the drivers or imperatives of change arising from either the external or internal environment of an organization. Broadly, these refer to the contextual factors as depicted in various change models (Pettigrew, 1985; Greenwood and Hinnings, 1988; Dawson, 1996; etc..). In the context of SAP (Situation, Actor, and Process) framework, these forces emanate largely from situation (Sushil, 2001) and may include forces like globalization, stakeholder's needs and expectations, emergence of new technology, government policies and legislations, etc. Haberberg and Rieple (2008), however, refer to them as factors that enhance the likelihood of organizational change requiring an analysis of the organization's environment, resources and stakeholders to delineate those forces.

In the context of the e-government domain, the key forces of change as identified from the literature include globalization, new opportunities, pressures of good governance, stakeholders needs and expectations, new technology, e-platform/e-business, government policies and legislations, and public private partnership.

Forces of Continuity

The term 'continuity' is widely used across disciplines and has various connotations. In the context of organizations, it has been defined as "the connectedness over time among organizational efforts and a sense or experience of ongoingness that links the past to the present and the present to future hopes and ideals" (Fry and Srivastava, 1992). In the context of organizational change, however, the construct 'forces of continuity' refer to those factors that contribute to the inertia in an organization (Haberberg and Rieple, 2008) and thus need to be

managed for effective change. Continuity forces in an organization, e.g. core ideology, core competence, culture, existing high performance etc, add to the inertia of the organization (Trompenaars and Woolliams, 2003; Sushil, 2005). These continuity forces are continued by default and if not consciously managed may come in the way of constructive change. Not all continuity forces however obstruct change. Some of them, for example core ideology, strong culture etc., may even be vital or desirable to be continued further in order to leverage change.

In the context of e-government, key forces of continuity as identified from the literature include large number and heterogeneity of citizen base, established traditional infrastructure, traditional process of service delivery, manual records or legacy databases, and existing culture.

Strategic Factors of E-government Projects

The 'Strategic Factors' in e-government domain comprise of all those deliverables which are strategic in nature from the perspectives of both, the project and the beneficiaries. The 'Project Factors', thus would include the set of factors required to evaluate e-government projects. Further, the need for a citizen centered evaluation framework has been proposed by several researchers (Jones *et al.*, 2007; Lee *et al.*, 2006). Thus the strategic factors of e-government would broadly comprise of two set of factors: Citizen Factors and Project Factors, the sub factors of which may be further drawn from strategy and e-government literature, and should be validated for the context used.

Project Factors

Project factors refer to those performance parameters which are related to the e-government projects. Though the literature review indicate a wide array of evaluation methods, the study adopts a comprehensive approach including financial, non-financial, technical, process related, and actor related parameters for assessing the e-government projects. The 'Strategy game card' (Sushil, 2009a) approach has been adapted for the e-government domain to include ten micro variables spanning both financial and non-financial parameters as replicability and sustainability, top management commitment, employee training and involvement, strategy and policy adopted, technological process, relationship with the private vendors, internal business efficiency, interaction with other external stakeholders, and the e-government readiness/maturity of the context situation.

Citizen Factors

Though the governments worldwide strive for citizen centric e-government services, the actual e-services provided are far from being citizen centric (Velsen *et al.*, 2009; Soufi and Maguire, 2007). Citizen centric or user centric approach has been identified as an important evaluation perspective for e-government projects by various researchers (Jones, Hackney and Irani, 2007, Macintosh and Whyte, 2008; Lee *et al.*, 2008; Verdegem and Verleye, 2009). For the research under consideration, citizen related performance parameters are grouped separately as a macro construct to emphasize its importance and includes five factors namely service efficiency, service quality parameters like availability, ease of use, information quality, and citizen participation and empowerment.

Research Hypotheses

Various researchers recommend balancing continuity and change forces simultaneously rather than alternately for successful change and sustainability (Leana and Barry, 2000; Huy, 2002; Sturdy and Grey, 2003; Sushil, 2005; Burchell and Kolb, 2006). Consequently it may thus be proposed that managing continuity and change concurrently i.e. interaction of continuity and change forces, would lead to better delivery of strategic factors (project and citizen factors taken together) in e-government domain as depicted in Figure 1. Thus, based on the theoretical

premise that managing continuity and change concurrently leads to better performance, the relationships between the constructs may be hypothesized for the three categories of performance factors as follows:

- *Hypothesis 1: Managing the forces of continuity and change simultaneously (i.e. interaction of both forces) lead to better delivery of strategic factors in e-government projects.*
- *Hypothesis 2: Managing the forces of continuity and change simultaneously (i.e. interaction of both forces) lead to better delivery of Project factors in e-government projects.*
- *Hypothesis 3: Managing the forces of continuity and change simultaneously (i.e. interaction of both forces) lead to better delivery of Citizen factors in e-government projects.*

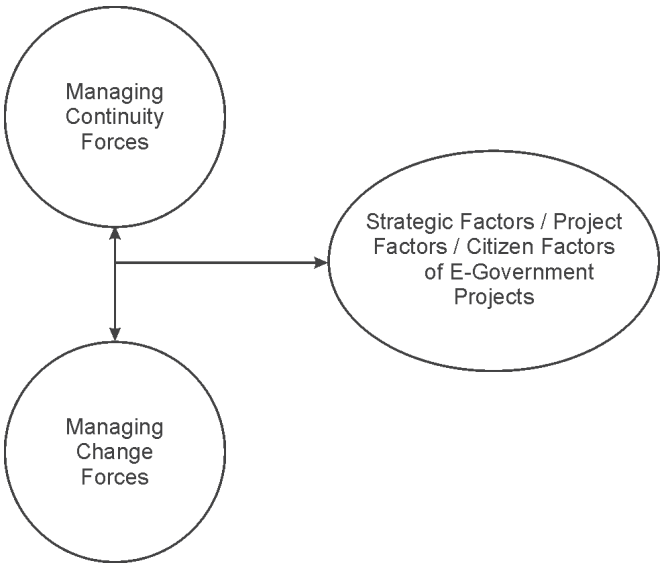

Figure-1: Management of Continuity and Change Forces concurrently and Performance Factors of E-Government

Methodology for Hypotheses Testing

A three step methodology is undertaken for testing the interaction of managing continuity and change forces on the three categories of e-government performance factors envisaged for the study; namely citizen factors, project factors and the sum of these i.e. strategic factors.

Step1: All the micro variables of change forces are regressed on each of the performance factors: citizen factors, project factors and strategic factors.

Step2: All the micro variables of continuity forces are regressed on each of the performance factors: citizen factors, project factors and strategic factors.

Step3: The product of the significant micro variables of continuity and change forces as identified in the above two steps are then regressed on each of the performance factors for testing the impact of interactions.

Finally, the variance explained (R Square) by the predictor variables in each of the steps are compared. If the value of R Square as determined in Step-3 is greater than those in step 1 and 2, then the hypotheses of the study is accepted.

Sample Description

The unit of analysis has been the planners and implementers involved in government-to-citizens (G2C) projects operational in India for at least two years. 'Planners' are referred to higher level officials, from both the government and the implementing agencies, and generally include the project director, deputy director, technical director, project manager etc. They are largely involved in planning, supervision and monitoring of the project. 'Implementers' refer to the middle level front end executives involved in the execution of the projects and include team leader, team member, system analysts, and similar executives. For the purpose of this survey, both planners and implementers are assumed as one homogenous group of G2C service providers.

Response from a sample of 131 planners and implementers involved with the G2C projects (more than twenty) has been elicited. A wide array of mission mode, state, and integrated G2C projects spanning various ministries and departments have been selected for the study. The method adopted for the sample selection has been largely purposive and judgmental, given the focus of the survey. For almost two-third of the sample of this survey, the questionnaire has been personally administered by taking prior appointments as the eligible respondents were

Table 2: Project wise Break-up of the Sample Respondents for Opinion Survey

S. No.	Name of the Project	No. of Respondents		
		Planners	Implementers	Total
1	Agriculture related projects(AGMARKNET, Plant Quarantine, etc)	5	4	9
2	Backend (NSDG, Standards)	4	3	7
3	Online Counseling	1	1	2
4	Common Service Center	3	2	5
5	E-District	2	1	3
6	E-Post	2	2	4
7	Online EPFO	2	3	5
8	IRCTC(e-ticketing)	1	1	2
9	e-filing of taxes	7	7	14
10	e-payment of tax refunds	4	5	9
11	PAN project	3	5	8
12	Land Records	2	3	5
13	MEDLAR (MOH)	1	1	2
14	Monitoring Vehicle Movement	2	2	4
15	National Do Not Call(NDNC)	2	1	3
16	National Portal of India(NPI)	2	2	4
17	Online Monitoring of NREGA	9	6	15
18	Online Passport	6	9	15
19	Publishing Exam Results	1	2	3
20	RTI related Project(CIC online, Jaankari)	5	4	9
21	Transport-Vehicle Registration	2	1	3
	Total no. of respondents	**66**	**65**	**131**

high officials either in the government ministry or the implementing agencies like National Informatics Centre (NIC), IBM, TCS etc. For the respondents stationed outside Delhi and NCR, telephonic requests were made before forwarding the email with the link to the questionnaire uploaded online. Several follow-up calls and emails were also sent to finally receive the response.

Analysis

The key propositions of this paper to be tested is that the interaction (product) of change and continuity forces leads to better delivery of the performance factors, i.e. impact of the product of significant continuity and change forces will explain greater variance in performance factors as compared to the impact of continuity and change forces taken separately. For this, three sets of regression analysis has been undertaken: first the three performance factors were regressed one by one on all change forces (eight micro variables), then on all continuity (five micro variables) forces, and finally on the interaction (products of three continuity and four change variables, i.e. twelve micro variables) of significant change and continuity forces. The results of the regression analysis are summarized in Table 3 and the sample regression output explaining the steps are provided in the Appendix 3.

Table 3: Regression Analysis Summary for Testing Interaction of Continuity and Change Forces on Performance Factors

Dependent variable	Independent Variables	Significant Predictor Variables with Beta coefficients	R	R Square	Sig Value
STRATEGIC FACTORS	All Change Forces	PGG(.295), NTG(.324), GPL(-.228), PPP(.174)	.531	.282	0.000
	All Continuity Forces	CUL(.467), LCB(-.225)	.484	.235	0.000
	Interaction of Continuity and change Forces	IPGGCUL(.446), IGPLLCB(-.525), IPPPCUL(.249), INTGLCB(.250)	.637	.406	0.000
PROJECT FACTORS	All Change Forces	PGG(.270), NTG(.300), GPL(-.250), PPP(.213)	.511	.261	0.000
	All Continuity Forces	CUL(.), LCB(-.), ETIN()	.515	.265	0.000
	Interaction of Continuity and change Forces	IPGGCUL(.418), IGPLLCB(-.467), INTGETIN(.270) IPPPCUL(.195),	.656	.430	0.000
CITIZEN FACTORS	All Change Forces	PGG(.262), NTG(.252)	.441	.195	0.000
	All Continuity Forces	CUL(.433), ETIN(.163)	.443	.196	0.000
	Interaction of Continuity and change Forces	IPGGCUL(.354), IGPLLCB(-.206), INTGCUL(.266)	.548	.300	0.000

Acronyms
PGG: Pressures for good governance
GPL: Government policy and legislation
NTG: New Technology
PPP: Public Private Partnership
CUL: Existing Culture
LCB: Large citizen base
ETIN: Established traditional infrastructure
IPGGCUL: Interaction / Product of PGG and CUL.....etc

Discussion

As clear from the above table (Table 3), the interaction of continuity and change variables explain greater variation in the performance factors than when addressed or managed separately. In case overall strategic performance factors, four change forces (PGG: Pressures for good governance, GPL: Government policy and legislation, NTG: New Technology, PPP: Public Private Partnership) and two continuity forces (CUL: Existing Culture, LCB: Large citizen base) were found to be significant predictors explaining variance upto 28% and 23%. However the interaction of these forces (product of four change and two continuity forces) resulted in four significant interactions explaining more than 40% variation in performance factors. The simultaneous impact/

interaction of the change force of 'pressures of good governance' and the 'cultural continuity force' exhibit the maximum effect on all the categories of performance factors. Similarly, the concurrent management of change forces like 'government policy and legislation' and the continuity force of 'large citizen base' leads to greater impact on performance factors. In all, seven interactions have been found to be significant predictors of performance factors.

The interaction of continuity and change variables explain greater variation in Project factors as compared to citizen factors. This is because the project performance factors are directly controlled/ maneuvered by stakeholders as compared to citizen factors which are the ultimate deliverables. The summary of hypotheses tested may be presented in Table 4.

Table 4: Hypotheses Relating to Association of Macro VariablesDependent Variable Associated with Variable Status of Hypotheses

	Dependent Variable	Associated with Variable	Status of Hypotheses
Testing the Impact of Interactions	Strategic Factors	Comparing the impact of Forces of Change, Continuity and Interactions	Accepted
	Project Factors	Comparing the impact of Forces of Change, Continuity and Interactions	Accepted
	Citizen Factors	Comparing the impact of Forces of Change Continuity and Interactions	Accepted

Conclusion

The empirical study as reported in this research paper ably demonstrates that managing continuity and change simultaneously affects performance parameters more than when managed separately. The analysis of the results of the survey indicates the significant change and continuity forces as predictors of e-government performance when managed separately. Two continuity forces and four change forces have emerged as significant predictors of e-government performance. In case of concurrent management of both continuity and change forces, seven interactions have been found significant. The simultaneous impact of 'good governance pressures' on the 'existing cultural aspects', explains the maximum variation. Results of the survey also indicate a greater impact of the interaction on project factors than citizen factors, project factors being the immediate variable and the citizen factors being the final deliverables of the e-government projects.

This paper is, thus, a modest attempt to validate the theoretical notion that managing continuity and change concurrently yields better results. Besides the theoretical contribution, the significant predictors as highlighted in the survey may provide valuable practical insights for the practitioners i.e. the planners and implementers of the e-government project.

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Appendix

Appendix 1: List of Identified Forces of Change and Continuity in E-Government

S. No.	Forces of Change	Explanation
1	***Globalization (GLB)***	Globalization has placed strong pressures on states to compete for trade flows, investments and resources and is a strong force outside the control of government. It is affecting stakeholder's perception of service delivery and seems to be the basic imperative to change the way governments relate to the citizens.
2	***New Opportunities(NOP)***	'E-government is not just about forms and services online', it brings about new and unique opportunities like enhanced efficiency, transparency, accountability, participation, effectiveness etc. for all stakeholders.
3	***Pressures of Good Governance (PGG)***	Governments are under continual pressure from the society to increase their effectiveness and efficiency, competing with their peers to provide electronic services to the citizens
4	***Stakeholders' Needs and Expectations(SNE)***	Citizen's expectations for better government services change with changing times. They expect a similar level of service from government as customers expect from e-business and hence e-alignment of e-government with the needs of the primary stakeholders is called for.
5	***New Technology (NTG)***	Adoption of information and communication technologies (ICT) to deliver government services has become a global trend in public administration. Proliferation of such new technologies has thus become the underpinning driver and enabler of e-government.
6	***The E-Platform (EPF)***	With citizens increasing comfort level with the e-platform, the pressure to adopt e-government increases. E-government offers the potential to reform the public sector, just as e-commerce is driving change in the business sector.
7	***Government Policies and Legislation(GPL)***	Changes in government policies and legislation are expected to pave the path for e-government implementation. Institutional infrastructure and apt legal framework has been identified by the researchers as a critical success factor for national e-strategy.
8	***Public-Private Partnership PPP)***	Public private partnership has emerged as a viable alternative towards faster and sustainable growth of e-government initiatives, and hence can be considered as a significant driver for change in the domain.
Forces of Continuity		
S. No.	**Forces of Continuity**	**Explanation**
1	***Large Number and Heterogeneity of Citizen Base (LCB)***	The challenge of addressing a large and heterogeneous citizen base affects the implementation of e -government projects. Governments, however, have to focus on training the existing citizen base to use the new delivery mechanism rather than strategize to retain them, as is the case with business organizations where the inertia creeps in due to the fear of losing large customer base.
2	***Established Traditional Infrastructure(ETIN)***	E-government projects inherit huge traditional infrastructure, which may become redundant with the implementation of e -government technology, are expected to experience greater continuity.
3	***Existing Process of Service Delivery (EPSD)***	A preexisting network of supply chain/ delivery process leads to a greater continuity in the current offering and could pose a major challenge for e-government implementation, if not adequately managed.
4	***Manual Records or Legacy Databases (LDB)***	From manual records to computerized databases and now networked databases, changes in governance has largely been technology driven, which if not leveraged can pose serious problems in e-government implementation.
5	***Existing Culture (CUL)***	E-government requires change in the processes, attitude and mindset of the government which is a big challenge. In fact the problem of change management in e -government implementation largely revolves around managing the existing culture.

Appendix-2 Items in the Questionnaire

Questions Related to Change Forces

S.No.	Description	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1.	Globalization is changing the way governments relate to citizens					
2.	Globalization of trade and commerce is driving e-governance					
3.	Global flow of information and technology is driving e-government projects					
4.	The cross border movement of people drives/impact e-government					
E-government projects brings forth opportunity for						
5.	➢ Cost reduction/ Improved Internal efficiency					
6.	➢ Better delivery of government services to citizens					
7.	➢ New investment for the businesses					
8.	➢ Better citizen participation and empowerment in the democratic process					
Governments are under continual pressure from the society to						
9.	➢ Improve their efficiency in delivering services to citizens					
10.	➢ Demonstrate greater openness or transparency in the process					
11.	➢ Ensure greater participation of citizens in decision making over the allocation resources for development					
12.	➢ Demonstrate greater accountability for the resources used					
13.	The need for good governance is an important force driving e-government initiatives					
14.	Increased time pressures lead citizens to expect routine governmental transactions online					
15.	E-government is also triggered by the corporate sector's need for efficient and faster interaction with the government.					
16.	Younger citizens accustomed to electronic transactions are demanding electronic delivery of government services					
17.	ICT (Information & Communication Technologies) is a tool for achieving better governance					
18.	ICT steers transformation in public administration					
19.	ICTs systematize and rationalize policy making processes.					
20.	Use of electronic platform for governance has become a globally accepted goal					
21.	E-commerce is an important precursor enhancing e-government development.					
22.	Increased level of citizen's comfort with the electronic medium is driving e-government					
23.	E-government is largely an outcome of policy initiatives of the government to improve its functioning					
24.	National e-governance Plan (NeGP) is driving e-government in India.					
25.	Proper institutional infrastructure is important for implementing e-government.					
26.	A facilitating legal framework is necessary for e-government					
27.	Fast rate of change in ICT leading to shortage of technical skills required for implementing e-government projects is driving public-private partnership (PPP)					
28.	Lack of funds in implementing e-government projects is an imperative for PPP					
29.	A public private partnership in offering e-government services is a better alternative towards faster growth of e government initiative					

Questionnaire Related to Continuity Forces

1.	E-Government project has resulted in substantial cost savings (Infrastructure, operational, personnel cost) to the government.					
2.	There is considerable increase in revenue earned from the project					
3.	There is adequate mechanism to recover capital cost					
4.	The volume of service delivered (number of citizens using the service) has increased					
5.	The extent of replicability (technical/commercial) of the project is high					
6.	The extent of innovation in service delivery is high					
7.	This project has been functional for several years.					
8.	There is adequate organizational structure to support the project for continuous functioning					
9.	This project is backed by is a strong level of top management (administration) support.					
10.	The project champion commitment to the project is high					
11.	There is continuity of project champions from conceptualization to roll-out phase of the project					
12.	Adequate level of employee training is carried out.					
13.	Employees are quite clear about their roles in the project					
14.	Employee involvement in design and implementation is quite high					
15.	Private vendors are involved in the project to a great extent					
16.	Service levels measures are properly defined for the private partners					
17.	Vendor assessment is undertaken on a regular basis					
18.	There are user groups conducting service reviews					
19.	The roadmap/ plan for the project is clearly laid out					
20.	Proper documentation policy for the project is adopted					
21.	There is a policy for customer feedback					
22.	Policies/ strategies for project assessment (3rd party audit) are in place					
23.	Technology architecture is compatible with international standards					
24.	The degree of scalability of the project is quite high					
25.	Extent of compliance with security standards is satisfactory					
26.	The technology is easy to install and operate					
27.	There are alternative arrangements in case of breakdown					
28.	There is substantial increase in productivity in handling transactions					
29.	The interaction between government employees across local, state and central levels is seamless (uninterrupted/smooth)					
30.	There is high level of process automation at the back-end					
31.	It is easy for the internal stakeholders (employees etc..) to adopt the e-government process					
32.	E-government has facilitated seamless interaction with its customers (citizens & business)					
33.	The process of interaction with vendors or other egovt. solution providers is quite effective					
34.	Government partnership with special interest groups (NGOs, CSOs, International organizations like OECD, UN, etc...) is facilitated by e-government strengthening social development.					
35.	There is a strong political will and leadership to implement e-government projects					
36.	The level of infrastructure (ICT) development and contracting undertaken for deploying e -government projects is adequate					
37.	Substantial capability development has been undertaken to facilitate e-government					
38.	Convergence in technology is paving way for greater maturity in e-governance.					

Questionnaire on Performance related Factors (Citizen's perspective)

With the implementation of the e-government project, there is a substantial increase in						
1.	➢ Total user time saved					
2.	➢ Total user money saved					
3.	➢ Number of citizens using the services					
4.	➢ Number of services offered to the citizens					
The user benefits that has resulted with the implementation of the e-government project are						
5.	➢ Availability of the system 24×7					
6.	➢ Accessibility through multiple channels (PCs, Kiosks, mobile phones..)					
7.	➢ Convenience of location/ Single window interface					
8.	➢ Simple to understand & use					
9.	➢ Ease of use due to local language interface					
10.	➢ Easy to use due to usefulness of help menus					
11.	➢ Increase in transparency					
12.	➢ Decrease in corruption					
13.	➢ Accuracy of information					
14.	➢ Security/Privacy of information provided by the citizens					
The implementation of the e-government projects						
15.	➢ Has led to an increase in government citizen interaction					
16.	➢ Keeps citizens informed/ build up knowledge					
17.	➢ Helps citizens communicate effectively with the state					
18.	➢ Makes citizens feel part of an active democracy					

Appendix 3 Sample Regression Output for Testing Interaction of 'Continuity and Change Forces' on 'Strategic Factors'

(Similar steps have been performed to test interactions on Project and Citizen Factors)

STEP-1: Change Forces as Independent Variable

Model	Variables Entered	Variables Removed	Method
1	AVCHPGG (Pressures for Good Governance)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	AVCHNTG (New Technology)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	AVCHGPL (Govt. Policy and Legislation)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	AVCHPPP (Public Private Partnership)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: STRGFACT (Strategic Factors)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.415	.172	.166	.396
2	.477	.228	.216	.384
3	.505	.255	.238	.378
4	.531	.282	.259	.373

a Predictors: (Constant), AVCHPGG

b Predictors: (Constant), AVCHPGG, AVCHNTG

c Predictors: (Constant), AVCHPGG, AVCHNTG, AVCHGPL

d Predictors: (Constant), AVCHPGG, AVCHNTG, AVCHGPL, AVCHPPP

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.207	1	4.207	26.845	.000
	Residual	20.217	129	.157		
	Total	24.424	130			
2	Regression	5.559	2	2.779	18.859	.000
	Residual	18.865	128	.147		
	Total	24.424	130			
3	Regression	6.239	3	2.080	14.523	.000
	Residual	18.185	127	.143		
	Total	24.424	130			
4	Regression	6.885	4	1.721	12.366	.000
	Residual	17.539	126	.139		
	Total	24.424	130			

a Predictors: (Constant), AVCHPGG

b Predictors: (Constant), AVCHPGG, AVCHNTG

c Predictors: (Constant), AVCHPGG, AVCHNTG, AVCHGPL

d Predictors: (Constant), AVCHPGG, AVCHNTG, AVCHGPL, AVCHPPP

e Dependent Variable: STRGFACT

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.862	.220		12.997	.000
	AVCHPGG	.275	.053	.415	5.181	.000
2	(Constant)	2.318	.279		8.304	.000
	AVCHPGG	.191	.059	.288	3.257	.001
	AVCHNTG	.211	.070	.268	3.028	.003
3	(Constant)	2.640	.312		8.452	.000
	AVCHPGG	.217	.059	.328	3.685	.000
	AVCHNTG	.254	.071	.323	3.558	.001
	AVCHGPL	-.140	.064	-.186	-2.179	.031
4	(Constant)	2.431	.323		7.529	.000
	AVCHPGG	.196	.059	.295	3.310	.001
	AVCHNTG	.255	.070	.324	3.620	.000
	AVCHGPL	-.172	.065	-.228	-2.638	.009
	AVCHPPP	.116	.054	.174	2.155	.033

a Dependent Variable: STRGFACT

STEP-2: Continuity forces as Independent Variables

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	AVCTCUL (Culture)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	AVCTLCB (Large and Heterogeneous Citizen Base)	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: STRGFACT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.430	.185	.179	.393
2	.484	.235	.223	.382

a Predictors: (Constant), AVCTCUL

b Predictors: (Constant), AVCTCUL, AVCTLCB

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.526	1	4.526	29.342	.000
	Residual	19.898	129	.154		
	Total	24.424	130			
2	Regression	5.730	2	2.865	19.617	.000
	Residual	18.694	128	.146		
	Total	24.424	130			

a Predictors: (Constant), AVCTCUL

b Predictors: (Constant), AVCTCUL, AVCTLCB

c Dependent Variable: STRGFACT

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.266	.320		7.086	.000
	AVCTCUL	.415	.077	.430	5.417	.000
2	(Constant)	2.650	.339		7.824	.000
	AVCTCUL	.450	.076	.467	5.955	.000
	AVCTLCB	-.140	.049	-.225	-2.871	.005

a Dependent Variable: STRGFACT

STEP-3: Interaction of Change and Continuity forces as Independent Variable

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	IPGGCUL	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	IGPLLCB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
3	IPPPCUL	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
4	INTGLCB	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a Dependent Variable: STRGFACT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527	.278	.272	.370
2	.591	.349	.339	.352
3	.621	.385	.371	.344
4	.637	.406	.387	.339

a Predictors: (Constant), IPGGCUL

b Predictors: (Constant), IPGGCUL, IGPLLCB

c Predictors: (Constant), IPGGCUL, IGPLLCB, IPPPCUL

d Predictors: (Constant), IPGGCUL, IGPLLCB, IPPPCUL, INTGLCB

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.792	1	6.792	49.689	.000
	Residual	17.632	129	.137		
	Total	24.424	130			
2	Regression	8.531	2	4.265	34.352	.000
	Residual	15.893	128	.124		
	Total	24.424	130			
3	Regression	9.415	3	3.138	26.555	.000
	Residual	15.009	127	.118		
	Total	24.424	130			
4	Regression	9.906	4	2.476	21.493	.000
	Residual	14.518	126	.115		
	Total	24.424	130			

a Predictors: (Constant), IPGGCUL

b Predictors: (Constant), IPGGCUL, IGPLLCB

c Predictors: (Constant), IPGGCUL, IGPLLCB, IPPPCUL

d Predictors: (Constant), IPGGCUL, IGPLLCB, IPPPCUL, INTGLCB

e Dependent Variable: STRGFACT

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.932	.153		19.116	.000
	IPGGCUL	6.201E-02	.009	.527	7.049	.000
2	(Constant)	3.241	.168		19.298	.000
	IPGGCUL	7.296E-02	.009	.621	8.216	.000
	IGPLLCB	-2.993E-02	.008	-.283	-3.742	.000
3	(Constant)	3.132	.169		18.571	.000
	IPGGCUL	5.795E-02	.010	.493	5.651	.000
	IGPLLCB	-3.579E-02	.008	-.338	-4.423	.000
	IPPPCUL	2.960E-02	.011	.245	2.735	.007
4	(Constant)	3.087	.168		18.381	.000
	IPGGCUL	5.248E-02	.010	.446	5.013	.000
	IGPLLCB	-5.562E-02	.012	-.525	-4.451	.000
	IPPPCUL	3.007E-02	.011	.249	2.813	.006
	INTGLCB	2.889E-02	.014	.250	2.064	.041

Brief Resume of Saboohi Nasim

Saboohi Nasim is an Assistant Professor in the Faculty of Management Studies & Research, Aligarh Muslim University, India. Her research interests span the areas of Strategic Management and e-Governance, particularly the management of 'Change and Continuity'. She has attended several national and international conferences and published in refereed journals. She has been awarded the National Doctoral Fellowship and also has to her credit the Cummin's Best Case Award. She is the Co-Editor of the *Global Journal of E-Business & Knowledge Management* and is also on the editorial board of the *International Journal of Global Business and Competitiveness* (www.giftsociety.org) and the *Journal of Change Management (*http://www.tandf.co.uk/journals/titles/14697017.asp).