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FLEXIBLE STRATEGY FOR MANAGING CONTINUITY AND CHANGE - MODELING THE FACTORS IN E-GOVERNANCE DOMAIN

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ABSTRACT

The tsunami of change have compelled businesses to evolve a more "flexible approach" for managing change and transformation. The emerging concept of "confluence of change and continuity" i.e. managing continuity and change simultaneously, apparently may seem paradoxical but there is ample research evidence of its application in spheres like corporate governance, organizational identity, industrial relations etc.

E-governance as a domain has witnessed tremendous action over the past decade and is subject to continual change. While Government as an entity is driven by continuity forces, e-governance calls for radical changes embracing new technologies and processes, thus, making it imperative to explore it from Continuity-Change perspective.

In this paper, the factors enabling change and continuity in E-governance in India is identified and structured in a hierarchical model using Interpretive Structural Modeling(ISM) technique. Further, a flexible strategic framework is suggested to manage the confluence of continuity and change.

Keywords: *Continuity and Change, Flexible Strategy, E-governance, Confluence.*

Introduction

Continuity and change in strategy discourses has been traditionally treated as mutually exclusive, as an either – or situation. Till 70's and 80's when the environment was relatively stable and the pace of change was comparatively slow, organizations focused on "incremental strategies" *(Quinn 1978, 1980)* with greater thrust on continuity. The organizations used to form strategies so as to survive and grow by maintaining continuity in their business domain. 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.

Despite the plethora of literature on strategic change and transformation – the voyage of change has not been smooth enough for a large number of leading organizations with strong legacy – who have actually ended up in greater turbulence and chaos.

This has given rise to a growing interest in the concept of "confluence of change and continuity" *(Sushil 2005),* i.e. managing continuity and change simultaneously. Apparently it may seem paradoxical but there is ample research evidence of application of such a concept in spheres like corporate governance, organizational identity, industrial relations etc.

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E-governance as a domain, has witnessed tremendous action over the past decade and are subject to continual change.(Stojanovic et al 2006)

Information and Communication Technology(ICT) and internet in particular , has not only ushered in new horizons for the government and the governed but even promises to alter the character of governments making it more efficient, more responsive, more accountable, and more democratic(Moon,2002;Abdullah and Kaliannan,2006). Despite the impressive growth of e-governance in making information and services available to people, the intra-governmental changes have been very slow, adhoc and plagued by poor planning, management , and leadership.(Kunstelj and Vitar,2004,Moon,2002). While government as an entity is driven by continuity forces, e-governance calls for radical changes embracing new technologies and processes. Hence, it is imperative to explore the domain of e-governance from continuity and change perspective.

The research paper under consideration is an attempt to explore the strategic management of continuity and change in e-governance domain in Indian context.

Continuity and Change – a Literature Review

Continuity, Change and Management Rhetoric

An analysis of management literature on change and transformation reveal that restructuring discourse is highly dependent on the rhetoric of "turbulent times*" (Thompson and Davidson, 1995)*. Authors demonstrate the gap between managerial rhetoric and business reality. *Eccles and Nohria (1992)* point out that management writers and practitioners talked of turbulence and transformative changes even in the supposedly past and less competitive context of the 1950s.They further demolish the rhetoric of Drucker and Tofler for making the same stirring announcements of impending change in nearly all their writings spanning decades. *Hyukzinski(1993)* observed that all the gurus gained the currency for their relevance to the changing times. Thompson and Davidson (1995), too, strongly refute the claims of such managerial rhetoric and state that there is no paradigm shift or complete break as these modern gurus ably demonstrate .Bureaucracies continue to evolve and develop new forms of hierarchy, rules, and control. They further establish that it is in fact important to retain a sense of 'continuity'. Several other researches too, have pointed to the need for both 'change and continuity' in organizations. (Ashforth and Mael, 1996; Barney et al,1998).

Strategic Change Vs Continuity

The organizations must realize that people are not Chameleons- they cannot change stripes and colors at the drop of a hat.*(Hart, 1993).*Most people have past accomplishments of which they are proud of and valuable strengths to bring forward. If they feel they are being told those things are to be discarded, they will not support the change efforts. According to *Tanenbaum and Hanna (1985)*, changes in organizational identity have been experienced as painful and have been resisted by organizational members. Stability in organizational identity is seen as providing members with psychological anchors in times of change *(Gustafson and Reger, 1995).*It has also been established that sense of sameness over time is necessary for psychological health.*(Albert and Whetten1985 and Shamir 1990).*

Christensen and Cheney (2000) indicate that spokespersons need to show that organizations are stable yet responsive entities with an inspiring history and a reliable presence. *Gioia(1998)* further suggests that research should explore how change is balanced with the need to maintain a connection to past conceptions of the organization.

Thus, every organization needs some stability or continuity for if everything about an organization were to be always in flux, it would be crippled by chaos. *(Volberda, 1998)* Yet

some aspects of the organization must change so that it can survive, and even exploit the shifts and turns of the environment.

Continuity and Change – a Case of Confluence

Leana and Barry (2000) argue that tension between stability and change is inevitable and is a part of organizational life. Others suggest that change leadership must balance continuity and change (Burke and Trahant 2000; Pettigrew et al 2001). Bianco and Schermerhorn(2006) reiterate that organizational leadership should allow for coexistent states of both 'continuity and change'. Strangelman (1999) further demonstrate this through his case study on British Rail that many reform minded managers and policy makers (who understand the emotive and political importance of nostalgia) deploy nostalgia as a proactive change-directed discourse rather than as reactionary force.

Sturdy and Grey (2003) , elaborating on how to manage continuity and change state that, "continuity and change be managed not as alternative states but as co-existent ones". They further add that it is imperative for managers today to embrace stability and learn to manage continuity if they want to survive. What can be a better testimony than the statement of a CEO cum change agent of a 125 year old retail giant in his narration on the transformation of his company (Sears Roebuck and Co.) in which he admits that "Managing change and continuity simultaneously – is a task far more delicate than managing change alone". Martinez (1997) further suggests the questions to be posed in order to identify the elements of continuity or things to be preserved. To quote Martinez, *"Two important questions had to be answered .First, what was there to preserve from the core? What were the historic values that could help us rebuild the heart and soul of our company going forward? And second, how do we stimulate change at the same time?"* To focus on things to be fixed and continued, he went on to identify 'Five strategic Principles" that would remain consistent throughout.

Thus, the literature review not only reiterates the importance of 'continuity' besides 'change', but also emphasizes the need to manage the confluence of both.

E-Governance in India

'E-governance' or 'electronic governance' ordinarily refers to the application of information technology to enhance the efficiency and effectiveness of government. The Gartner Group describes e-government "as the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationship through technology, the internet and the new media" (Gupta, Kumar, and Bhattacharya; 2004)

The Ministry of Information Technology defines e-governance as "the application of Information Technology to the process of Government functioning to bring about Simple, Moral, Accountable, Responsive, and Transparent, governance"(mit.gov.in;2003)

Evolution of E-Governance - a Timeline

The origin of 'E-Governance' in India lies in the Gandhian philosophy of "Su-Raj" after "Swaraj'-which essentially seems to be a means for 'Good Governance'. Although the central government had started promoting the use of information technology in managing its internal processes way back in 1975 when it had set up National Informatics Centre(NIC), sincere efforts for e-governance were made in 1996 when Ministry of Personnel, Public Grievances and Pensions drew up an action plan for an effective and responsive government.(Sethi, 2003)

A more tangible step towards e-governance journey was undertaken in the year 2000 when a 12-point 'Minimum Agenda for E-Governance' was drawn up by a High Powered Committee to

provide for basic infrastructure and training and use of IT for G2G and G2C transactions. The 10th Five year plan however gave a further fillip to the process which conceived the launch of India Portal, setting up of National Institute of e-governance, Central Repository of Data, Citizen Services Centre etc….to further improve India's position in global e-governance rankings , Government of India declared 2001 as the "Year of e-governance".

Further to make e-governance and all pervasive phenomena in India, a national level e-governance plan (NEGP) has been drafted and is being implemented in phases since 2006. NEGP envisage capacity building at the national level for smooth delivery of e-government projects. It aims to bring together common physical infrastructure, policies and standards and deliver services through shared, assisted service centers. One lakh such centers are to be constructed under public –private partnership so that state governments are relieved of the technology and infrastructure hassles associated with the back end. To ensure a strong and shared back-end, the NEGP budget per year ranges from Rs.2000-3000cr and is required for at least for next 5-6 years.

Given the high priority assigned to e-governance and the government's willingness to allocate and spend such huge sum e-democracy or SMART governance does not seem to be a distant dream.

E-Governance Readiness of Indian States – a Review

Given the efforts and resources deployed in implementing e-governance projects across India, it is imperative to look at the current e-government maturity level from states perspective. As per United Nations (UN 2004), e-government readiness refers to an assessment of the states use of internet and www for provision of information, products and services – including the development of telecommunication and human capital infrastructure.

Various agencies like NCAER and DIT (Dept. of IT) have assessed the e- readiness of Indian states and classified them into various categories. A snap shot of the categories of Indian states since 2004 maybe summarized in the Table-1 (Appendix-1.)

E-Governance Projects in India – a Snapshot

E-governance in India has come of an age, by now, with a plethora of projects initiated across various levels and domains. National Informatics Center (NIC – a premier IT organization of the government has been instrumental in facilitating e- government projects implemented in the country. A sector-wise classification of e-governance initiatives has been compiled and published by NIC in 2005. Table-2 (Appendix -1) summarizes the leading e-government projects across various sectors based on this publication:

Challenges of E- Governance in India

Citizens interact with government in three ways

- As consumers of government information
- As customers of government services , and
- As citizens participating in government decisions and policy making

(Abramson et al 2006) No substantial contribution seems to have been made in any of these three aspects. Mishra (2006) identified ten emerging challenges reflecting the complexity of the field of e-governance. Some of the challenges / issues of e-governance in Indian context have been identified by Sachdeva (2006) as funding, management of change, privacy, authentication, delivery of service, use of local language, standardization and interoperability.

However , as per R.Chandrasekhar (Jt.Sec – e governance, Ministry of IT) , the real issue of e-governance in India is "Implementation- meaning doing it all : changing technologies , changing processes, building capacities , managing transitions, ensuring both the delivery of services and that people to use them " (Mani , 2006).

E-Governance Projects in India – Success Vs Failure

Recent researches in e-government assessment indicate a "strong theme of over optimism, even hype and consequent lack of balance in considering the impact of e-governance" (Heeks and Bailur, 2006). Despite the tall claims and promising future prophesied by e-Governance Gurus, this has been reiterated in the dismal success of e-government projects in developing countries. According to Robert Schware, (Leed Informatics Specialist, World Bank) 33% of all e-government initiatives in developing countries have failed while 50% have succeeded partially and 17% are successful.(The Hindu 2004). Some of the reasons cited are failure to provide the desired services, lack of political will, time frame failure etc.

Sachdeva (2006 – A) has identified 25 steps that leads to e-governance failures. To cite a few - faulty planning , gap between reality and vision , over interference of vendors, greater focus on "e" , media hype, award driven projects, big bang e-governance etc. To succeed in e-governance implementation these pitfalls need to be avoided.

Managing Change and E-Governance – A case for Confluence of Continuity and Change

According to Kumar, Sushil, and Gupta (2003), besides the issue of effectiveness, the problem of "change management" looms large for successful implementation of e-governance. The issue of managing change in e-governance has been aptly highlighted by various other authors as well (Gupta et al, 2004; Stojanovic et al, 2006; Al-Mashari et al, 2001; Burns and Robins, 2003….).

Highlighting the issue of 'change' in e-governance, Gupta (2006) states it is largely due to inadequate recognition of interdependencies among technology, process, and people. He further suggests that a coherent integration of IT network, government institutions, and processes would result in successful e-government initiatives.

Sundberg and Sandberg (2006), observe that the basic problem in e-government implementation arises when cross functional work and processes collide with the traditional and hierarchical command and control structures of the government agencies. Thus, the real issue is not with technology or the process but with the actors or the people in e-governance. They further propose that since changing culture and breaking functional mindsets is very difficult, the process of change in e-governance domain should be continuous, strategic (incremental) rather than embarking on huge radical redesign programs. Sachdeva (2006- A), too, suggests that radical changes entail greater resistance and should be avoided in e-governance domain. According to him, the big bang approach to e-governance may lead to its failure. The best approach is to "think big, start small and scale fast."

This finding strengthens the conjecture that the "Forces of Continuity" is quite high in e-governance domain and hence 'change management' alone will NOT work. What is called for is a "confluence of continuity and change" while formulating the strategic framework for e-governance projects. Thus, the 'strategic management of continuity and change" is inevitable in e-Governance domain as well.

Continuity and Change Factors in E- Governance in India

Based on the literature review, the continuity factors and the forces driving change in e-governance domain in India maybe discussed as follows.

Continuity Factors in E- Governance in India

The continuity factors suggested by Sushil (2001) are forces of inertia which compel businesses / organizations to cling to its current business domain. The bigger the organization and the better its performance, larger would be the inertia. Such an inertia which seems to contribute to better performance in current situations become a barrier to change.

Some of the continuity factors in e-governance domain may be identified as follows

i. *Large Number of Customer Base:* E-governance is essentially an innovative way of delivering the existing government services enabled by ICT. In majority of the e-government projects there already exists a large set of customers (citizens, businesses, etc...) whom the government continue serving even after implementing the new technology but in a different and better manner. Unlike the business and commercial organization where the inertia creeps in due to the fear of losing large customer base , in e-government projects simply have to focus on training the existing customer base to use the new delivery mechanism rather than retaining them. The issue of training the existing customer base especially in rural areas is indeed a Herculean task. It acts as a deterrent for change and thus becomes a strong continuity factor in e-government domain.

ii. *Well Established Physical Infrastructure*: Most of e-government projects inherit an already established huge physical infrastructure which may become redundant with the implementation of e-government technology. Thus, larger the physical set up already in place for a given e-government project, the larger would be the force of continuity.

iii. *Existing Process of Delivering Services:* For most of the government services there already exists in place a cumbersome process of delivery mechanism, which has inertia of its own. Such a pre-existing network of supply chain/ delivery process leads to a greater continuity in the current offering.

iv. *Manual Records or Legacy Databases:* Change in governance has largely been technology driven. From manual records to computerized databases and now e-governance requires networked databases in order to cater to the needs of the citizens in real time. Although it's a strong imperative for change, the change per se is not only enormous but difficult too.

v. *Core Competence in Manual Systems:* Most of the government functions in the pre e-government era has developed an edge in the delivery of services using manual records / system. Such a core competence in old system is hailed a major continuity factor resisting change in e-governance domain.

vi. *Existing Culture:* Culture of any organization is the major driving force for maintaining continuity. "Change in culture" is the most important challenge e-government projects face. The work culture in government offices /establishments being most resistive to change, calls for a high level of continuity on the culture front.

vii. *Performance:* High levels of existing performance force the organizations to continue adhering to the current framework of operation discouraging change. In e-governance domain, however, high level of performance seems to be rare and hence may not be a strong force of continuity.

Change Factors in E- Governance in India

The change factors suggested by Sushil (2001) largely emanates from the change situations.

Some of the significant change forces driving e-governance may be enumerated as follows:

i. *Globalization*: The process of globalization is all pervasive and e-governance is no exception. Despite all localization forces, the stakeholder's expectation of better service delivery owing to changes around does seem to be a major imperative for growth to adopt the e-way.

ii. *New Opportunities:* E-governance unfolds plethora of new opportunities for all its stakeholders. For the governed and the ones governing –the e-platform does promise a wide array of activities which are mutually beneficial. While customers of e-government may benefit from the improved, transparent and efficient system, the government itself would gain from the satisfaction of its citizen.

iii. *Competitive Pressures:* The forces of globalization and technological developments are changing the thinking of the governments around the world. Several reforms have been initiated for good governance and e-governance acts as a catalyst to it.

iv. *Stake Holders Needs:* With changing times citizen's expectations for better government services keep rising. This acts as a pressure on the government to adopt better ways of satisfying the increasing expectations of the stakeholders, thus paving the way for adoption of e-governance.

v. *New Technology:* Technology has been the prime driver of change across all domains. E-government technology is expected to facilitate, enable, and empower both the governed and the party governing. Innovative use of ICT to deliver government services in a better manner is the driving force for e-governance.

vi. *E-business:* One of the basic driver of change in today's era is e- business. With clear advantage provided in terms of speed, accuracy, low cost and wider reach, e-business model provide the basic framework of delivering e-government services and hence is one of the most important imperative for change in this domain.

vii. *Government Policies and Legislation*: Another major driver for change in e-governance domain is the government itself. E-governance is largely an outcome of "New Public Management "- a revolution that started in 1990s to improve governance transforming the way public services are delivered .(Hughes 2003, Saxena 1996). This has further resulted in major change in government policies and legislations, paving the path for e-governance.

viii. *Public- Private Partnership:* A public private partnership in offering e-government services is a viable alternative towards sustainability and faster growth of e-government initiative. Major Indian companies like HLL, ITC, RIL etc.When are highly active in rural markets may be involved directly in e-government initiative. Thus, public private partnership further seems to facilitate the change in e-governance domain.

Interpretive Structural Modeling

After identifying the continuity –change factors in e-governance domain, methods /tools like Interpretive Structural Modeling (ISM) and MICMAC analysis is undertaken to develop further clarity on the importance and hierarchy of relationship among these factors. An introduction to the methodology, application and interpretation may be discussed as follows.

Introduction to ISM

Identification of structure within a system is of great value in dealing effectively with the system and better decision making. ISM methodology helps to impose order and direction on the complex relationships among elements of system (Hawthrone and Sage, 1975). Interpretive Structural Modeling (ISM) can, therefore, be defined "as a process that transforms unclear and poorly articulated mental models of systems into visible , well-defined models useful for many

purposes".(Sushil, Vrat and Saxena, 2006) .The philosophical basis and the subsequent conceptual and analytical details has been provided by Warfield(1973,1974).

The user of this technique with the help of experts identifies and interprets the relationship between a complex set of factors. After a series of iterations, a hierarchical structure of relationship among the variables is extracted and depicted in the form of a diagraph.

For a complex problem, like the one under consideration, where an attempt is made to study continuity and change management –a new frontier, and that too in a new domain like e-governance, ISM technique is bound to add clarity and value in developing conceptual constructs. This methodology has been adopted to obtain a structural hierarchy of relationship between the factors affecting (either driving for change or continuity) e-governance in Indian context.

The steps involved in using ISM technique for the context defined above may be enumerated as follows:-

i. Factors driving change and continuity in e-governance domain are identified by undertaking literature review.

ii. A contextual relationship among the factors is established (by taking cues from the experts, if possible)

iii. A Structural Self-interaction Matrix (SSIM) is developed indicating pair wise relationship among factors.

iv. From the SSIM matrix, Reachability matrix is derived and is then checked for transitivity of relationship among factors.

v. The Reachability matrix as obtained in the above step is partitioned further to obtain various levels/ hierarchy of factors.

vi. Based on the levels identified in the above step a diagraph is prepared which is the converted into an ISM.

vii. In the end the ISM model is checked for any inconsistency and eventually interpreted in the context defined.

Developing the Interpretive Structural Modeling in E-Governance Domain

Based on the factors of continuity and change identified in e-governance domain, the ISM model is developed by undertaking the steps enumerated above. The Self Structured Interaction Matrix (Table-3), the Reachability matrix (Table-4), and the Tables (5&6) depicting the partitioning process are all explained in the Appendix-II.

Table 1 : Continuity and Change Factors in E-governance in India

1)	Large Number of Existing Customer Base.	Continuity Factors
2)	Well Established Physical Infrastructure	
3)	Existing Process of Delivering Services	
4)	Manual Records and Legacy Databases	
5)	Core Competence in Manual Systems	
6)	Existing Culture	
7)	Performance	
8)	Globalization	Change Factors
9)	New Opportunities	
10)	Competitive Pressures	
11)	Stakeholders Needs and Expectations	
12)	New Technology	
13)	E-business	
14)	Government Policies and Legislation	
15)	Public Private Partnership	

Context: Factors Affecting/Impacting E-governance in India

Hierarchy of Factors Driving Change and Continuity

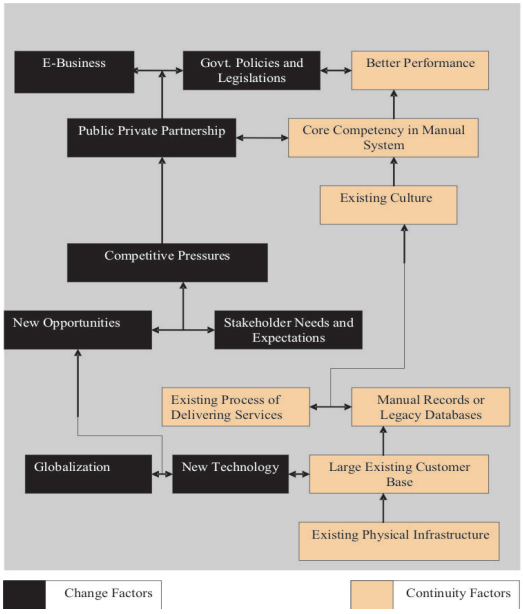

Figure 1: Hierarchy of Factors Driving Change and Continuity in E-governance in India

As a result of the iterations of the final reach ability matrix, the hierarchy of factors driving change and continuity in e- governance domain has been derived as follows:

Interpretations:

In the above figure depicting the hierarchy of factors affecting e-governance in India, the factors at the top are more independent ones that are enabled by the factors at the lower end of the hierarchy. The factors highlighted in darker (black) shade are the factors driving change in favor of E-governance. The factors in lighter shade represent the continuity forces. A closer look at the ISM model indicates that forces of continuity is affecting e-governance more than the forces of change as they are mostly clustered at the bottom. The most critical forces driving change in E-governance domain in India are – globalization, new technologies leading to new opportunities enhancing stakeholders expectations and competitive pressures, resulting in Government Policies and legislations, E-business and Public private Partnership.

Some of the continuity factors that have emerged out to be more significantly affecting e-governance are existing physical infrastructure, large customer base, manual records, and traditional system of service delivery. The remaining three continuity factors i.e better performance, Core competence in manual systems, and the existing culture are the resultant outcomes of these basic factors.

MICMAC Analysis

In order to develop greater clarity on the ISM front, MICMAC analysis is conducted. The MICMAC method which is essentially a system of matrices applied to structural analysis, was developed by Duperrin and Godget(1973) for developing the hierarchy for the variables. The objective of

MICMAC analysis is to analyze the driver power and the dependence power of the variables (Mandal and Deshmukh, 1994). The driver and the dependence power is derived from the final Reachability matrix (Table 4.2).

The continuity and change factors are classified into four quadrants depending upon their driver and dependence power (Figure 4.2). The quadrant **A** having weak driver and dependence power comprises of factors which are *autonomous factors*. These factors are relatively disconnected from the system and have only few links with the context. The quadrant **B** comprises of strong dependence and weak driving power. Quadrant **C** consists of factors that have both strong driving and dependence power. These factors are called the *linkage factors* and are very critical for the context. Finally the quadrant **D** includes *independent factors* that have strong driving power but weak dependence. The key variables of the context are the ones with a very strong driving power and falls into the quadrant C and D of independent and linkage factors.

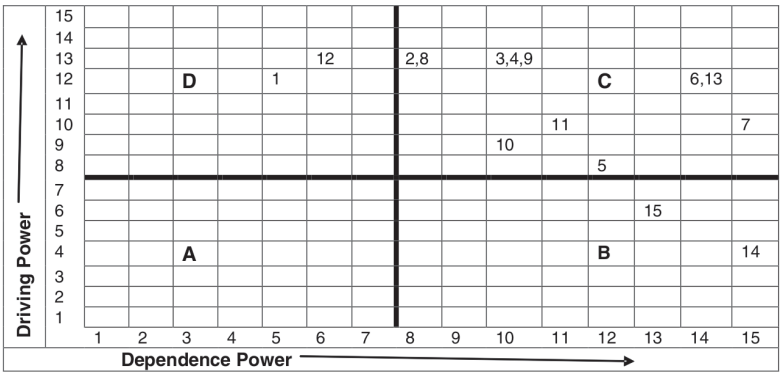

Figure 2- Driver and Dependence Power Diagram

Interpretation

The driver- dependence diagram helps in identifying the cluster of factors affecting e-governance in Indian context. Since none of the factors fall in the quadrant A of autonomous factors, it means none of the factors are disconnected or remotely linked to the context, implying thereby, that all factors are relevant and significant for the context of e- governance in India.

The two basics factors – large existing customer base and new technology – are strong driving forces. Large existing customer base is driving continuity while new technologies are driving changes in e- governance.

Public- Private Partnership and government policies and legislations are the resultant outcome of other driving forces and hence have been placed at the top of the ISM hierarchy and in the dependent quadrant B of MICMAC analysis. The remaining factors of both continuity and change have all been clustered as the linkage variables in quadrant C. Well established physical infrastructure, existing process of service delivery, manual records & legacy databases, and core competence are the forces that are driving continuity in e-governance. Any change in any of these factors will have an impact on the other variables. Amongst the continuity factors - existing culture and existing performance have exhibited the maximum driving and dependence power .They are not only the outcome of the continuity factors but are further driving continuity in e-governance domain. Being the most powerful linkage factors, they deserve special attention.

The change forces that have been clustered as linkage factors are globalization, new

opportunities, competitive pressures, stake holder's needs and expectations and e-business. Of these forces, globalization and new opportunities have the maximum driving and dependence power as they are both triggers and outcomes of change.

Strategic Framework for Managing Continuity and Change- a Literature Review

Often firms are tempted to implement change by aligning their assets with the environment without giving due weight age to the firm's basic strategic characteristics. Sherman , Rowley, and Armandi (2007) have aptly emphasized the importance of pre-planning phase wherein they recommend the development of organization's strategic profile and then create a strategy that does not require a change in organization' key strategic strength. The idea is "Don't throw the baby out with the bath water".

Although hosts of management writers have tried to draw attention towards the issue of change and continuity, very few of them have actually attempted to present a framework for managing it. After an extensive literature review, two pioneering contribution in this area has been put forward by Henk Volberda (1997, 1998) and Sushil (2005).

Framework for Resolving the "Paradox of Flexibility"

The 'Paradox of Flexibility', according to Volberda (1998), refers to the simultaneous need of an organization to manage " Change and Continuity". The basic premise of his framework is that every successful organization should combine change and stability. This, however, is possible only if the firm is adequately "flexible". The amount of flexibility needed depends on the degree of environmental turbulence- the three main causes of which are- Dynamism, Complexity, and Predictability.

"Flexibility "in an organization, however, is generated or depends on the interplay of two basic things—mangers' capacity to exert dynamic or variable control within the organization (called 'Dynamic Management Capabilities') and the responsiveness or "controllability" of the organization. These two dimensions are at the heart of Volberda's analysis of flexibility. When DMC's are applied in the organization, three basic type of flexibility are produced—Operational, Structural, and Strategic. The degree of flexibility required by an organization depends on the degree of turbulence the organization has to contend with. To cope with greater turbulence the organization should have yet another flexibility called 'mataflexibility'-which refers to the creation, integration, and application of flexible capabilities.(Figure 3)

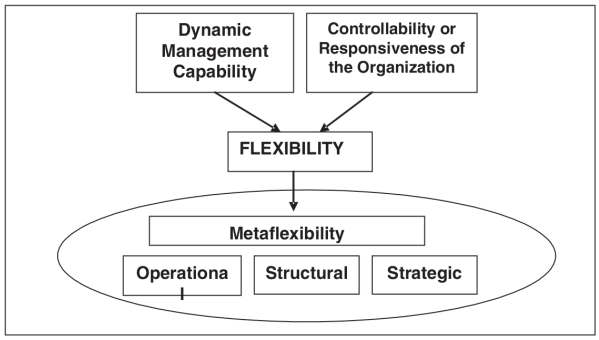

Figure 3- Types of Organizational Flexibility

(Source:Adapted from H.W.Volberda,"Building the Flexible Firm.How to Remain Competitive")

Volberda, finally suggests a framework for strategic management of flexibility by integrating

management capabilities and Organizational design to match environmental turbulence level. Together with flexibility mix and the controllability of the organization he defines four main types organizational form-Rigid, Flexible, Planned and Chaotic.

The 'rigid' form', according to Volberda, with low DMCs and controllability is fragile and vulnerable when faced with environmental changes. The 'planned' form relies primarily on operational flexibility and copes well with anticipated changes only. The 'flexible' form has a high degree of structural and strategic flexibility and has sufficient mastery of its environment to strike a balance between change and continuity. The 'chaotic' form with high degree of flexibility and low controllability is always in a state of flux. *Volberda, further stresses that none of the four forms permanently resolves the tension between change and continuity* . He then describes Flexibility Audit and Redesign (FAR) method for revitalizing over rigid organizations and routinizing excessively chaotic organizations.

His work further culminates into categorization of firms into various types depending on the way they manage "continuity and change" or trajectories undertaken to resolve the perennial tension between planning and flexibility.

Flexible Strategy Framework for Managing Continuity and Change

While Volberda's ' Strategic Management of Flexibility' indirectly approach the issue of continuity and change, Sushil's 'Flexible Strategy Framework for Managing Continuity and Change' is comparatively more bold and direct attempt to resolve the continuity and change paradox.

According to Sushil (2005), the "continuity ' forces hold back an organization from change by creating inertia in the current business domain. In the context of SAP framework (Sushil, 2001) the continuity forces are generally linked with the actors and processes. Some important 'continuity forces' are: *large customer base, huge infrastructure, investment in technology, well established culture, core competence, supply chain and distribution network and higher level of business performance.*(Figure - 4)

Besides the forces of continuity, the author also identifies the major forces for change which largely emanate from change situations. Some of the significant change forces that have been highlighted by the author, include, *globalization, new opportunities, changing competition, changing customer needs, new technology, e-business models, Mergers and Acquisition (M & A), and changes in government policy and legislation.(Figure-4)*

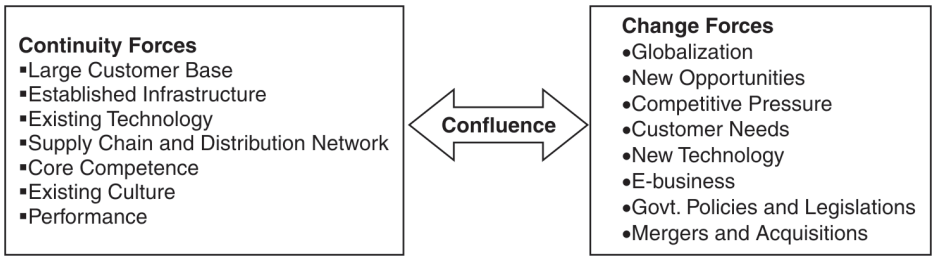

Figure 4 Major Continuity and Change Forces

(Source: Adapted from Sushil(2005),"A Flexibility strategy framework for managing continuity and change")

The continuity and change forces, according to Sushil, would be different for different industries and business organizations. The author further proposes Continuity–Change(C-C) matrix (Figure-5), depicting four possible combinations, metaphorically named according to the characteristics of that category.

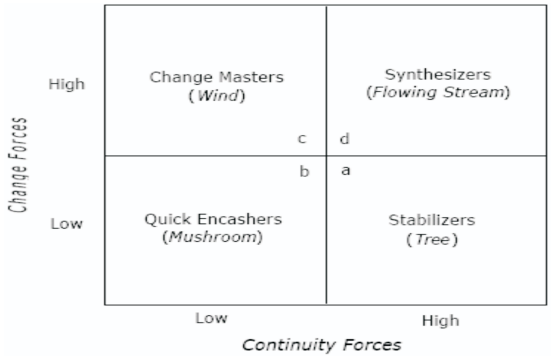

Figure 5- Types of Organization Based on Continuity –Change Matrix

(Source: Sushil(2005),"A Flexibility strategy framework for managing continuity and change)

The C-C matrix provides a flexible strategic framework to evolve various strategy options depending upon the mapping of continuity and change forces. Flexible strategies for different continuity change combinations are depicted as follows.(Table -2)

The strategy proposed for managing a situation of high continuity and change is metaphorically stated as '*Flowing Stream Strategy'*. A 'flowing stream', seems to be a very apt analogy, as it continuously changes its course, and at times radically, while maintaining its continuity at the same time. The strategy frontier, however, should be explored further for a right balance and synthesis of opposing forces, so as to divert their inertia on new frontiers without losing the benefits of continuity.

Types of Organizations	Position in C-C Matrix	Strategic Path	Metaphorical Name	Characteristics	Example
Stabilizers	High Cont and Low Change	**Incrementalism and Evolution**	Tree	Evolve slowly	Petrochemicals Steel, fertilizers
Quick Encashers	Low Cont and Low Change	**Freewheeing and Experimentation**	Mushroom	Quicky encash opportunities	Coaching, Small scale and Tiny industries
Change masters	Lw Cont and High Change	**Strategic Renewal and Transformation**	Wind	Change radically	BPO. ITES
Synthesizers	High Cont and High Change	**Strategic Flexibility for integrating opposites**	Flowing Stream	Confluence of Cont. and change	Telecom Electronics, Automobile

Table 2: Flexible strategies for Continuity –Change combination

(Source: Adapted from Sushil (2005),"A Flexibility strategy framework for managing continuity and change)

Flexible Strategy Framework for Managing Continuity and Change in E-governance Domain

As against the popular notion of e-governance being change centric- calling for radical change, a more incremental approach is recommended taking into consideration the legacies or the inertia of the pre e-governance era. Based on the discussions so far, the following flexible strategic framework may be proposed to resolve the paradox of continuity and change in e-governance in India (as illustrated in the Figure 6)

- Implementers of e-government projects should identify the key factors driving change and also the critical factors obstructing positive change in the context of the specific project.

- Continuity –change template should be developed for each project, facilitating a deeper understanding of the factors in consultation with the experts in the field. Higher weights may be assigned to more critical factors affecting the project and the scores may be used further to map the project on the continuity- change matrix.
- After determining the type of organization based on the scores from the template, it is imperative to identify the right strategic path for managing the confluence. Various strategic options as prescribed by the Flexible Strategy Framework (Sushil 2005) include Strategic Renewal and Transformation, Incrementalism and Evolution, Free-wheeling and Experimentation and Strategic Flexibility for Integrating Opposites.
- Given the fast pace of change in e-governance context, it is expected that both forces of continuity as well as that of change will be high in almost all projects, thus calling for a strategy managing the confluence of these factors. Hence, the Flowing Stream Strategy – prescribing strategic flexibility for integrating opposites, seems to be the most apt strategic path in the e-governance domain.

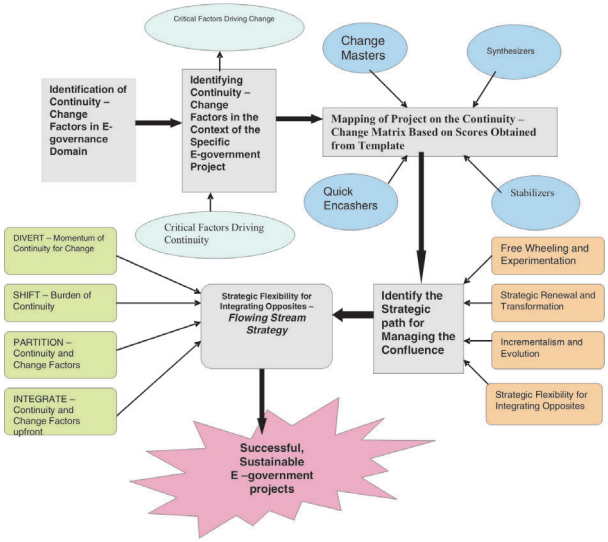

Figure 6: Framework for Managing Continuity –Change confluence: Strategic path to Sustainable E-governance Projects

- **"Flowing Stream Strategy"** is recommended for strategic management of confluence of continuity and change in e-governance domain. This strategy further includes the following strategic actions to be taken.(working paper,Sushil,2007)
  - o *Diverting the Momentum of Continuity to Change* – The critical continuity forces as identified through ISM should be leveraged for the desired change. For example, the existing legacy databases in pre e-governance era are being changed to suit the new e-business technology required for e-governance.
  - o *Shifting of the Internal Continuity Forces to External Change Forces* – The burden of continuity forces maybe shifted by undertaking strategic actions like re-structuring or outsourcing. For example, in e-governance domain capacity building especially in the technical area is being outsourced to the private players.
  - o *Partitioning of the Factors of Continuity and Change* – While the strategic actions of diverting and shifting as discussed above require limited flexibility, partitioning requires

greater strategic flexibility to handle the confluence of continuity and change. It includes the analysis of factors that need to be handled separately in paradoxically separate manner, for example globalization vs. localization etc.

- *Integrating the Forces Opposing each Other* – At the highest level of strategic flexibility continuum is the integration action. To synthesize the paradoxically opposite forces ingenious ways of integration is required. Although there is no fixed formula for this strategic action, yet two time tested routes that facilitate integration is creating a culture of innovation and learning in the organization.

The exact path adopted, however, would depend on the context of the project under consideration.

Conclusion

Thus, it is imperative to manage continuity and change in e-governance domain. Flexible Strategy Framework proposed above may be used as a guideline for managing the required confluence. Modeling of factors however provides the conceptual clarity regarding the hierarchy of relationship among factors. Since e-governance as a domain seems to be high on both continuity and change, Flowing Stream Strategy is recommended for integrating the opposites. Further, the strategic actions –Divert, Shift, Partition, and Integrate, as prescribed by the Flowing Stream Strategy provides a clear blueprint managing the required confluence in e-governance domain.

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APPENDIX-1

(E-governance in India)

Table 1 - E- readiness of Indian State Governments

Category	States		
	2006**	2005*	2004*
Leaders	Karnataka, Maharashtra, Tamil Nadu, Andhra Pradesh, Chandigarh	Karnataka, Maharashtra, Tamil Nadu, Andhra Pradesh, Chandigarh	Karnataka, Maharashtra, Tamil Nadu, Andhra Pradesh
Aspiring Leaders	Gujarat, Goa, Delhi, Punjab, Kerala, Haryana	Gujarat, Goa, Delhi, Punjab, Kerala	Gujarat, Goa, Delhi, Chandigarh
Expectants	West Bengal, Pondicherry, Madhya Pradesh	West Bengal, Pondicherry, Madhya Pradesh	West Bengal, Uttar Pradesh, Kerala
Average Achievers	Uttar Pradesh, Chattisgarh, Orissa, Himachal Pradesh, Sikkim , Rajasthan	Uttar Pradesh, Chattisgarh, Orissa, Himachal Pradesh, Sikkim ,	Madhya Pradesh, Punjab, Pondicherry,
Below Average Achievers	Mizoram, Jammu and Kashmir, Assam , Uttaranchal, Jharkand, Manipur	Mizoram, Jammu and Kashmir, Assam , Uttaranchal, Jharkand	Haryana, Rajasthan, Himachal Pradesh, Uttaranchal, Chattisgarh, Orissa, Mizoram, Tripura, Meghalaya, Andaman and Nicobar Islands
Least achievers	Bihar, Arunachal Pradesh, Nagaland, Daman and Diu, Lakshawadeep, Dadar and Nagar Haveli, Tripura	Bihar, Arunachal Pradesh, Nagaland, Manipur, Daman and Diu, Lakshawadeep, Dadar and Nagar Haveli, Tripura	Assam, Jharkand, Bihar, Jammu and Kashmir, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Daman and Diu, Lakshawadeep, Dadar and Nagar Haveli

* Source - India – e-readiness Assessment Report 2003-2004

** Source - Dibakar Ray et al , 2006.

Table 2 : A Snapshot of e-government Projects in India

Sector	***E-Gov Project***	***Description***
Common Enterprise Applications	Intranic	A common platform for 3500 staff members – a success story with 2500 hits per day
	Intragov	A framework that embraces G2G and G2B and G2E for transactions and solutions
Agricultural and allied services	Agmarknet	A roadmap to network 7000 agricultural produce whole sale market and 32000 rural markets
	Food.net	Connects all agencies involved in procurement distribution and management of food grains.
Rural Development	Gyandoot	Initiated in 2000 January in Dhar district of MP with an objective to provide useful information to people.
Land Record and property registration	Bhoomi	It permits online updating of land records, making it radically different from land records systems
	CARD	Computer aided administration of registration Dept. project - a transparent system of valuation of properties.
Finance	ICES	E-commerce gateway facilitating filing of all import and export documents
	VATMACS	System of collection of sales tax in Haryana
Judiciary	Indian Courts	List the cause lists – schedule of cases to be heard by the court
	Case status	Pending case status information in HC and SC
Health	E-hospital	Managing health information in all government hospitals of Andhra Pradesh
Infrastructure	Powernet	Connect all apex organizations in power sector
	Coalnet	Wide area network for coal sector
Industry and commerce	Company Directory	Information of registered companies
	DGFT	Information related to foreign trade
IT for masses	FRIENDS	Constitutes essentially of centres that offer a one stop front end, It enabled payment counter facility for citizens to make all kind of govt. payment.
	E -Suvidha	A single window interface for application processing
	Lokwani	A government initiative in UP – citizen interface with government

APPENDIX-I1
(Interpretive Structural Modeling)
Table 3 -Structured Self Interaction Matrix(SSIM)

Continuity and Change Factors														
	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1	V	V	O	O	V	V	V	O	X	X	V	V	X	X
2	V	V	X	O	V	V	O	V	X	X	X	X	X	
3	V	V	V	A	V	X	X	A	V	X	X	X		
4	V	X	X	A	V	V	X	X	X	V	V			
5	O	V	V	A	A	A	X	A	X	X				
6	X	V	X	A	X	A	X	X	X					
7	X	X	X	A	X	A	A	A						
8	X	V	X	X	V	V	X							
9	V	V	X	X	X	V								
10	V	V	X	X	A									
11	V	V	X	X										
12	V	V	X											
13	X	X												
14	A													
15														

Table 4 - Final Reach ability Matrix

Continuity and Change Factors																Driver
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	12
2	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	13
3	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	13
4	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	13
5	0	1	1	0	1	1	1	0	1	0	0	0	1	1	0	8
6	1	1	1	0	1	1	1	1	1	0	1	0	1	1	1	12
7	1	1	0	1	1	1	1	0	0	0	1	0	1	1	1	10
8	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13
9	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13
10	0	0	1	0	1	1	1	0	0	1	0	1	1	1	1	9
11	0	0	0	0	1	1	1	0	1	1	1	1	1	1	1	10
12	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	13
13	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	12
14	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	4
15	0	0	0	0	0	1	1	1	0	0	0	0	1	1	1	6
Dependence	5	8	10	10	12	14	15	8	10	10	11	6	14	15	13	

Table- 5 Partitioning the Reach Ability Matrix into Different Levels (Iteration-i)

Factors	Reach ability set	Antecedent Set	Intersection Set	Level
1	1,2,3,4,,5,,6,7,9,10,11,14,15,	1,2,3,6,7,	1,2,3,6,7,	
2	1,2,3,,4,5,6,7,8,10,11,13,14,15	1,2,3,4,5,6,7,13,	1,2,3,4,5,6,7,13,	
3	1,2,3,4,5,6,7,9,10,11,13,14,15,	1,2,3,4,5,6,8,9,10,12,	1,2,3,4,5,6,9,10,	
4	2,3,4,5,6,7,8,9,10,11,13,14,15,	1,2,3,4,7,8,9,12,13,14,	2,3,4,7,8,9,13,14	
5	2,3,5,6,7,9,13,14,	1,2,3,4,5,6,7,8,9,10,11,12,	2,3,5,6,7,9,	
6	1,2,3,5.,6,7,8,9,11,13,14,15	1,2,3,4,5,6,7,8,9,10,11,12,13,15,	1,2,3,5,6,7,8,9,11,13,15	
7	1,2,4,5,6,7,11,13,14,15,	1-15 (all factors)	1,2,4,5,6,7,11,13,14,15,	I
8	3,4,.....,15	2,4,6,8,9,12,13,15,	4,6,8,9,12,13,15	
9	3,4.....,15	1,3,4,5,6,8,9,11,12,13,	3,4,6,8,9,11,12,13,	
10	3,5,6,7,10,12,13,14,15,	1,2,3,4,8,9,10,12,13,	3,10,12,13	
11	5,6,7,9,10,11,12,13,14,15	1,2,3,4,6,7,8,9,11,12,13,	6,7,9,11,12,13,	
12	3,4,.....15	8,9,10,11,12,13,	8,9,10,11,12,13,	
13	2,4,6,7,8,9,10,11,12,13,14,15	2,3.....15	2,4,6,7,8,9,10,11,12,13,14,15	I
14	4,7,13,14,	1.....15 (all factors)	4,7,13,14,	I
15	6,7,8,13,14,15,	1,2,3,4,6,7,8,9,10,11,12,13,15	6,7 , 8, 13, 15	

Table-6 Partitioning the Reach Ability Matrix into Different Levels (Iteration ii-viii)

Iteration	Factors	Reach ability set	Antecedent Set	Intersection Set	Level
ii	5	2,3,5,6,9	1,2,,3,4,5,6,9,10,8,11,12	2,3,5,6,9	II
ii	15	6,8,15	1,2,3,46,8,9,10,11,12,15	6,8,15	II
iii	6	1,2,3,6,8,9,11	1,2,3,4,6,8,9,10,11,12	1,2,3,6,8,9,11	III
iv	10	3,10,12	1,2,3,4,8,9,10,11,12	3,10,12	IV
v	9	3,4,8,9,11,12	1,3,4,8,9,11,12	3,4,8,9,11,12	V
v	11	9,11,12	1,2,3,4,8,9,11,12	9,11,12	V
Vi	3	1,2,3,4	1,2,3,4,8,12	1,2,3,4	VI
vi	4	2,3,4,8	1,2,3,4,8,12	2,3,4,8	VI
Vii	1	1,2	1,2	1,2	VII
Vii	8	8,12	2,8,12	8,12	VII
vii	12	8,12	8,12	8,12	VII
viii	2	1,2	1,2	1,2	VIII