e-Governance Implementation – A Literature Review Analysis

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Abstract

e-Governance has become an imperative mode for Governments across the globe to engage and transact with citizens. From being an alternate channel to becoming the norm, e-Governance has come a long way. However, e-Governance implementation is being challenged by impediments like resource inadequacy – financial, process reengineering, IT & Human, etc. Lately, e-Governance implementation has been at the centre of research, which in turn has resulted in an increase in the number of papers dedicated to the subject. As result, it is prudent to analyse the existing literature to identify various aspects associated with the implementation of e-Governance along with methodologies being applied in the process.

Accordingly, the paper aims to analyse the determining factors of e-Governance as identified in research studies published in the last one and a half decade (2000-2015). *Based on the investigation of extant literature available on the subject, it has been established that technological, financial, Human resource and Information privacy and security related factors are the major determinants of e-Governance. However, paper in the process of identification duly acknowledges the limitations of the study and has suggested research directions for further research.*

Originality/value – The originality of the research lies in the finding presented over a 15 year period in e-Governance research. The above was achieved by analysing This has been achieved by analysing publication in databases of EBSCO and Emerald.

Keywords: *e-Governance; e-Government; eGov; implementation challenges; implementation success factors; literature analysis; success factors*

Introduction

The world bank defines e-Government as "..the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management….". E-government is a global phenomenon occurring in developed and developing countries (Misra, 2009). Recognizing the importance of Information and Communication Technology (ICT), governments globally started taking e-Government a step further by including

citizens, thus adopting e-Governance. Although multiple definitions of e-Governance exist, in some cases it has been defined as public sector's use of information and communication technology in order to improve the delivery of information and service, thereby encouraging citizens' participation in the decision-making process. Further, it also leads towards accountability, transparency and effectiveness (UNESCO). However, e-Governance goes beyond service provision to build external interactions (Heeks, 2001) or enhanced democracy by increasing representative participation in political decision making (Lenihan, 2002) or strengthening the democratic institutions & processes and involve public in political choices so as to ensure that their needs and priorities are respected (Council of Europe, 2007). E-Governance has been known to hold a huge potential for improving governmental processes through citizen co-production (Milakovich, 2012; Tapscott, Williams & Herman, 2008).

Given the transformative potential that e-Governance holds, it has now become an imperative mode for Governments across the globe to engage and transact with citizens. From being an alternate channel to becoming the norm, e-Governance has come a long way. Governments across the globe are committing and investing considerable financial and other resources, towards e-Governance. The total global Government Information Technology spend has been pegged at $ 2,23,596 Mn for 2016 and it is projected to hit $2,64,874 Mn[1]. e-Governance space continues to benefit from widespread acceptance and adoption of the effective ways it offers to both Governments and citizens to partake and collaborate. In addition, we see the IT spending being driven by the transformation of citizen facing services. As governments start to unwind the siloed nature of citizen information, they will need to focus more on addressing legacy back office services. Consequent to the largescale adoption of e-Governance, a number of publications dedicated to it, has increased over the recent years. It would therefore be worth to reflect on the state of e-Governance by examining the available scholarly literature on the subject. Although the ongoing trends of different success and adoption determining factors of e-Governance have being explored in various countries across the globe, it is not yet known how consistently these factors are contributing in different contexts and over time, as there are scant studies that have reviewed this aspect over such dimensions and period of time. Such lack of knowledge and clarity may hamper advancement of models in implementation and adoption of e-Governance research. Hence, the overall aim of this paper is to identify and present the results of a theoretical evaluation of existing e-Governance implementation and adoption research by investigating the diversity of determining factors. This is realised through the following objectives:

- Classify identified journal publications according to the period of research
- Determine the geographic location of contributing authors;
- Identify the type of statistical tools and techniques employed based on quantitative research adopted.
- Identify major success determining factor for e-Governance

The following sections describe the methodology employed which is followed by a section on presentation of findings. Finally, the concluding remarks are put forward along with discussion on the limitations of the study, and suggestions for future research directions.

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[1] https://ovum.informa.com/resources/product-content/global-government-technology-spending-forecast-infographic

Data collection

The analysis was initiated with a search for articles related to e-Governance. This was transpired through the use of the following set of keywords and phrases: set one "e-Government", "e-Governance", "e-Gov", "electronic Government", "electronic Governance" "E-Gov" and set two "implementation", "usage", "acceptance", "adoption" and "diffusion" and within the timeframe 2000 to 2015. The keywords from the two sets were used in all possible permutation and combinations for search of the online journal in databases of EBSCO and Emerald. Primary reason for selecting EBSCO and Emerald Database was that the said database boosts of numerous titles from publishers of international repute, thereby making it possible to search & locate significant proportion of published material on the chosen topic.

A total of 198 articles were identified from more than 63+ journals. These articles were further examined for their relevance to the study. It may be noted that some of the papers have been excluded from the study since they were not scientific papers & merely expressed the topic. Post cleaning of the data, a set of 75 articles was identified for carrying out the said process.

All these articles were carefully read and are provided in the reference section. The resulting set of articles and their corresponding list of journals is provided at Table 1.

S.no	Name of Journal	ABDC rank	Impact factor
1	B&IT	A	1.429
2	BPMJ	B	1.88
3	IT&ID	-	0.56
4	IJBS	C	0.23
5	IJPSM	B	1.58
6	JBEM	B	1.43
7	JEG	-	0.33
8	JEIM	A	2.126
9	JPART	A	3.047
10	JSIT	B	1.37
11	JAI	A*	2.839
12	RPR	-	1.846
13	AUDE	-	0.08
14	AMP	-	5.13
15	AGBR	-	-
16	CAIS	A*	0.574
17	DECPR	-	2.911
18	EC&ECS	-	0.664
19	EJISE	-	0.8

S.no	Name of Journal	ABDC rank	Impact factor
20	PAM	-	-
21	EJISEV	-	-
22	ESJ	B	0.17
23	GJFSM	-	3.32
24	IMJ	B	5.063
25	ISJ	A*	2.066
26	ISM	B	1.44
27	IJMC	C	5.063
28	JIES	-	-
29	IJTM&SD	C	0.27
30	JCMR	C	0.11
31	JIP	-	-
32	JMIS	A*	1.72
33	JAIST	A*	2.38
34	JTAECR	B	0.59
35	LGS	A	1.825
36	PIE&B	C	0.17
37	IWJEGPR	-	-
38	PA&D	A	0.68
39	PAQ	A	0.5
40	POR	-	0.89
41	SAJBM	C	0.05
42	SPAR	B	0.83
43	TEDE	-	2.45
44	TIJ:TPSIJ	-	-
45	TJEGPR	B	1.593
46	TJEIM	A	2.126
47	TERUM	-	0.462
48	JEG	-	0.33
49	TIJPS	-	-

Table 1: Articles and their corresponding list of journals

Notes: B&IT: Behaviour & Information Technology; BPMJ: Business process management journal; ITID: Information Technologies & International Development; IJBS: International Journal of Business and Society; IJPSM: International journal of public sector management; JBEM: Journal of Business Economics and Management; JEG: Journal of E-Governance; JEIM: Journal of Enterprise Information Management; JPART: Journal of public administration research and theory; JST: Journal of Systems and Information Technology; JAIS: Journal of the

Association for Information Systems; RPR: Review of Policy Research; AUDE: Acta Universitatis Danubius. Œconomica; AMP: Administratie si Management Public; AGBR: Amity Global Business Review; CAIS: Communication of the association for Information systems; DECPR: Digest of Electronic Commerce Policy and Regulation; ECECSR: Economic Computation & Economic Cybernetics Studies & Research; EJISE: Electronic Journal Information Systems Evaluation; PAM: Public Administration and Management; EJISEV: Electronic Journal Information Systems Evaluation Volume; ESJ: E-service journal; GJFSM: Global Journal of Flexible Systems Management; IMJ: Information Management Journal; ISJ: Information systems journal; ISM: Information Systems Management; IJMC: International Journal of Management Cases; JIES: Journal of the Institute of Economics-Skopje; IJTM&SD: International Journal of Technology Management & Sustainable Development; JCMR: Journal of Contemporary Management Research; JIP: Journal of Information Policy; JMIS: Journal of management information systems; JAIST: Journal of the Association for Information Science and Technology; JTAECR: Journal of theoretical and applied electronic commerce research; LGS: local government studies; PIEB: Perspectives of Innovations, Economics and Business; IWJEGPR: I-Ways Journal of E-Government Policy and Regulation; PAD: Public Administration and Development; PAQ: Public Administration Quarterly; POR: public organization review; SAJBM: South African Journal of Business Management; SPAR: Systemic Practice and Action Research; TEDE: Technological and economic development of economy; TIJ:TPSIJ: The Innovation Journal: The Public Sector Innovation Journal; TJEGPR: The Journal of E-Government Policy and Regulation; TJEIM: The Journal of Enterprise Information Management; TERUM: Theoretical and Empirical Researches in Urban Management; JEG: Journal of E-Governance; TIJPS: The Indian Journal of Political Science

In order to allow for a time sensitive analysis, the period of the analysis is broken into three blocks each of five years and is provided in Figure 1. The number above each time period is the count of articles pertinent to that period.
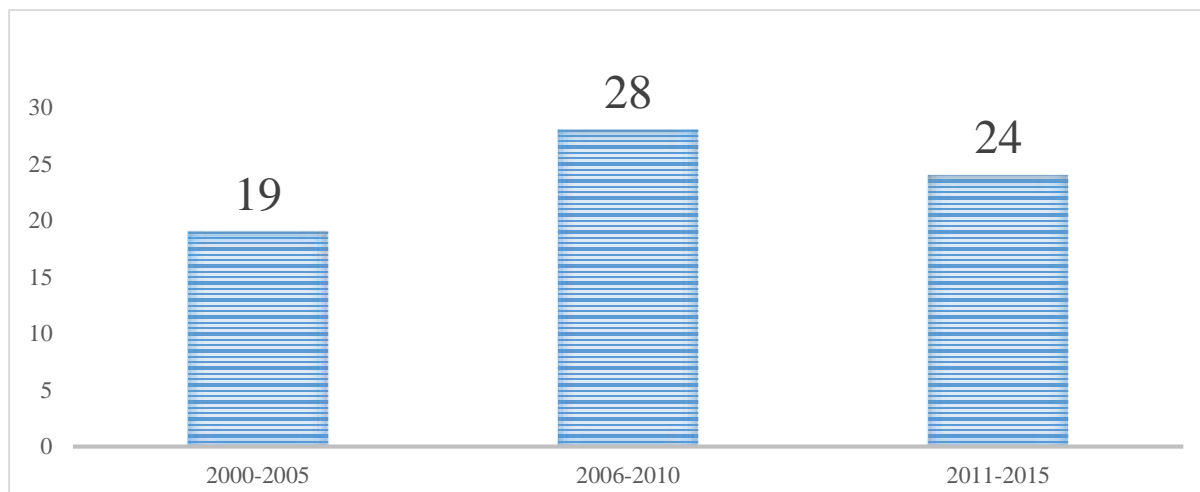

Figure 1: Number of articles on e-Governance – block year wise

Research methodology

The method of analysis draws from the studies carried out by Toni et al. (2004) and McCrea (2007), Michel (2007) and Silvana (2007), Singla (2009) related to classification of theoretical and empirical research. The authors in these,

have classified studies into theoretical or empirical works. Furthermore, theoretical work can further be divided into applied, conceptual and illustrative-concepts.

Conceptual studies describe the models, theories or structures along with explanations / reasons; whereas illustrative studies offer guidance with respect to practice along with recommendations for action and explain the stages to be fulfilled. On the other hand, applied-concept offers a mixture of conceptual & explanatory elements and are based on structures, ideas and speculations instead of systematic and direct observation of reality. Empirical studies can be classified as case studies, field studies and case & field studies.

The retained articles were carefully categorized as per the above methodology and the final resultant classification is provided at Table 2.

	2000-2005	*2006-2010*	*2011-2015*	*Total*
Total Empirical	13	18	19	**50**
Case & Field study	0	2	1	**3**
Case Study	8	11	17	**36**
Field Study	5	5	1	**11**
Total Theoretical	6	10	4	**20**
Applied concept	1	3	0	**4**
Conceptual	1	4	1	**6**
Illustrative	4	3	3	**10**
Total	**38**	**56**	**46**	**140**

Table 2: Classification of articles

From the table above, it is evident that a majority of the articles reviewed were empirical (71%) in nature. The table further indicates that the percentage of empirical studies has increased over time periods of study. Within the empirical studies, case study based works was most prevalent, followed by field study and case & filed study. Among the theoretical methods, illustrative concept studies were the most common, followed by concept and then applied concepts.

Discussions and conclusion

E-governance in the recent times has gained much traction as a preferred mode of engaging with the citizens by offering higher level of satisfaction & value to the target group. However, most of the developing countries, especially India, have not been able to derive value from the same to its full extent. As a result, we have undertaken this literature review to identify the factors affecting the adoption rate of e-governance across a gamut of countries ranging from Asia to Europe.

Based on the analysis, we here are presenting a state-of-the-art literature review on the area of e-Governance, with a special reference to India. We have categorized & differentiated the existing literature based upon conceptual models / theories / structures vis-à-vis applied-concepts for deriving deeper insights out of the analysis (Table:2). Further, we have also given emphasized on the geographic region considered in the article, since region specific infrastructure along with related variables tend to play an important role in the adoption rate of e-governance, which in turn translates into overall success of the e-governance adoption rate. The analysis is further strengthened by the time sensitive

analysis of the existing literature by introduction of block period analysis, wherein each of the block represent a 5-year period (Figure:1). One of the uniqueness of the said literature review is introduction of bifurcation of the papers considered in the analysis based upon the ranking of the Journal & its Impact Factor (Table:1). The above-mentioned classification is expected to not only help researchers in clearly identifying the issues but understand the existing gaps in the literature both at macro as well as micro level.

From the context of both theoretical and empirical research being conducted in the field, research in USA (23 studies) was the most explored country, followed by UK (19 studies). Further the quantum of research in USA is further concentrated in the early period of this study ie years 2000 – 2005. This may be due to the reason that USA held the top position in e-Government rankings during the period. The ranking of USA might have created, a higher interest amongst researches to derive insights and provide recommendations for other economies. The subsequent top explored countries as identified through our analysis are UK (17 studies), Canada (11 studies) and Germany, India and Italy (each with 10 studies). India and China (7 studies each) figuring amongst the other top studied countries, coupled with the fact that most of these research have been undertaken in recent years, may be attributable to them being the fastest growing economies of the world. Given the above, a gap that emerges for future research, is in terms of under represented economies. Researchers may consider, undertaking studies for such countries, thereby not only enhancing the pool of knowledge but also providing for direction for such economies.

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Grand Total
USA	1	2	5	2	1	2		1	1	1	3			1	**20**
UK			1	1		5	1	1		1	5			2	**17**
Canada		1	1	1		2				1	3	1		1	**11**
Germany			1			1	1			1	4			2	**10**
India		1	1	1						1	5	1			**10**
Italy						1	1	1		2	4			1	**10**
Sweden		2				1				1	4			1	**9**
Spain						1	1			1	5			1	**9**
Denmark		1				2				1	3			1	**8**
Australia		1	1			1				1	3			1	**8**
Estonia		1				2				1	3			1	**8**
France		1	1			1				1	3			1	**8**
Netherlands			1			1				1	4			1	**8**
Greece						1				1	5			1	**8**
Portugal						1				1	5			1	**8**
Slovenia						1				1	5			1	**8**
Belgium						1				1	4			1	**7**
China			1	2						1	3				**7**
Malaysia		1				1			1	1	3				**7**
Ireland						1				1	4			1	**7**
Pakistan				1					1	1	3	1			**7**
Poland						1	1			1	3			1	**7**
Romania										1	4	1		1	**7**
Mexico		1				1				1	2	1			**6**
Tanzania				1						1	4				**6**

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Grand Total
Austria						1				1	3			1	**6**
Hungary						1				1	3			1	**6**
Japan			1			1				1	2			1	**6**
Lithuania		1								1	3			1	**6**
Luxembourg						1				1	3			1	**6**
South Africa		1								1	3				**5**
Turkey						1				1	3				**5**
Korea			1			2			1		1				**5**
New Zealand	1		1			1				1	1				**5**
Singapore			1			1				1	2				**5**
Cyprus										1	3			1	**5**
Chile		1				1				1	1				**4**
Other Middle East countries	0	1	0	0	0	0	0	1	1	12	17	2	1	0	**35**
Other Scandinavian countries		2	0	0	0	4	0	0	0	3	5	0	0	1	**15**
Other Latin America and Caribbean countries	0	1	0	0	0	0	0	1	0	29	28	0	0	0	**59**
Other African countries	0	1	1	2	0	0	0	0	0	50	104	1	0	0	**159**
Other Countries	0	3	1	2	0	6	0	2	1	62	83	1	0	6	**167**
Total	**2**	**23**	**19**	**13**	**1**	**48**	**5**	**7**	**6**	**193**	**359**	**9**	**1**	**34**	**720**

Table 3: Country wise distribution of studies

Analysis over other dimensions reveal, only a few studies having used control variables (Jun et al., 2010, Krishnan et al., 2012) or carrying out a time series analysis (Nguyen et al., 2016, Wang et al., 2004). This leaves a serious gap in research, wherein the relationship between the factors effecting e-governance over the dimensions of time and across countries, has been sparingly conducted.

Basis our study, a list of top identified determining factors, sorted through the frequency of their occurrence in these studies has been created. Further these factors have been categorized into broad buckets, drawing from the studies of Chen et al. (2009), Song et al. (2010) and Weerakkody et al. (2011). These broad buckets are political, social, technological and organizational factors. It is pertinent to note that these categories are neither mutually exclusive nor collectively exhaustive. Hence, a study could be figuring in one or more buckets. Moreover, while a ranking of factors would be created, as an outcome of this exercise, the purpose is not to rank various factors in terms of their importance, but to identify the critical factors.

The political factors as identified include, top commitment, availability of funds, regulation & policy and Governance. The social factors include, business process re-engineering, change management and trust, whereas the technological factors comprise of information & communication technology and information security & privacy. Lastly the organizational factors include human capital, ownership & management and localization. Table 3 shows the quantum of articles wherein each sub-factor has been identified and its corresponding contribution (percentage) to the

population of this study. It may be noted that the total in regards to this study, stood at 187 and not 70, since an article in many cases dealt with one than one factor.

	e-Governance Factors	2000-2005	2006-2010	2011-2015	Total
Political factors	Top Commitment	5;2.24	8;3.59	2;0.90	**15;6.73**
	Availability of Funds	9;4.04	6;2.69	6;2.69	**21;9.42**
	Regulation & Policy	6;2.69	5;2.24	4;1.79	**15;6.73**
	Governance	2;0.90	1;0.45	0;0.00	**3;1.35**
Social Factors	Business Process Re-engineering	2;0.90	5;2.24	5;2.24	**12;5.38**
	Change Management	2;0.90	5;2.24	6;2.69	**13;5.83**
	Trust	1;0.45	4;1.79	2;0.90	**7;3.14**
Technological factors	Information & Communication Technology	9;4.04	16;7.17	11;4.93	**36;16.14**
	Information Security & Privacy	7;3.14	8;3.59	7;3.14	**22;9.87**
Organizational factors	Human Capital	9;4.04	12;5.38	11;4.93	**32;14.35**
	Ownership & Management	2;0.90	3;1.35	3;1.35	**8;3.59**
	Localization	0;0.00	1;0.45	2;0.90	**3;1.35**
	Total	**54;28.87**	**74;39.57**	**59;31.6**	**187;100**

Table 3: Factor wise breakup of articles on e-Governance articles

As evident from table 3 and figure 2, technological factors (N=58) followed by political factors (N=54) have the most occurring sub-factors, over the period of this study. Further within technological factors, information and communication technology related sub-factors is the most dominating sub-factor (N=36) whereas in political factors, availability of funds is the most dominating sub-factor (N=21). From an individual sub-factor perspective, information and communication technology related sub-factors (N=36) again leads the research findings followed by those related to human capital (N=32). While the above is an indicator to the factors identified by various authors in the past, what is evident from the table above is that the way an organization drives its e-governance implementation, while addressing the information security and privacy concerns, among others is also a determinant identified for successful implementation of e-governance.

Some of the key sub-factors identified as drivers of e-Governance, are discussed below:

A. Political factors

1. Top Commitment

Top commitment refers not only to the commitment from the Government's top management to implement, operate and maintain e-Governance, it additionally calls for an ongoing enhancement in offerings. e-Governance requires continuous approval and commitment from the highest authority to facilitate its sustenance and continuation without any unanticipated delays or project failures (Heeks, 2003). With a holistic understanding and appreciation of the strategic nature of e-Governance and its associated benefits, followed by involvement and support of the top authorities, would drive the mandate to implement and diffuse the

project with more confidence, by the implementing authorities and officials (Kurunananda et al., 200; Weerakkody et al., 2009)

A clear mandate and direction will facilitate planning and overcoming resistance to change, unclear position, thereby resulting in higher levels of success (AlTameem et al., 2006; Zarei et al., 2008). Hence a continuous top commitment is imperative for dealing with probable resistance to change and would facilitate interdepartmental communication and cooperation (Chen et al.,2001).

2. Regulation & Policy

Public offices are governed by regulation and policies. They derive their authority and direction from legal and constitutional enablers. Hence, formal and enabling administrative and policy framework plays an important role in shaping the clientele for public services, as design, implementation and management of e-Governance initiatives interact with regulations, laws, and policies for not only operational aspects but also in order to address legal constraints and overcome policy barriers (Snellen and Schokker, 1992; Dawes and Nelson 1995; NGA 1997; Landsbergen and Wolken 1998; Chengalur-Smith and Duchessi 1999; Dawes and Pardo 2002; Mahler and Regan 2002). In many cases administrative and policy framework that pre-date the deployment of e-Governance, continue to restrain innovation (Harris 2000).

3. Availability of Funds

e-Governance projects require significant capital and revenue outlays, thereby availability of funding transpires into a barrier towards the adoption of e-Governance (Bonham et al., 2001; Heeks, 1999; Ho, 2002). Traditionally, the major, if not only, means for financial resource for such development projects, originated from the central government funds. With the advent of public partner partnership models for implementation, though the percentage of outlay from the exchequer has reduced, it is not completely obliviated. Further in the context of economies like India, the participation of the private entities, in end to end e-Governance delivery, including up front investment, is yet to take off on a large scale. This participation has further been dampened by issues like delay in payment realization, operational non viability etc. Hence, the lack of financial resources, especially from central government for e-Governance initiatives may be a major barrier.

4. Governance

Governance provides for a conducive environment, thereby allowing for participants in all aspects of the economy to easily evolve, learn, and adapt (Meso et al., 2006), while also assuring political & economic stability. Further pre-existing corruption in a system is likely to prevent the implementation of e-Governance, as it brings about transparency and efficiency (Bussell, 2011; Singh, 2017).

B. Social Factors

1. Business Process Re-engineering

Business Process Re-engineering refers to the critical analysis and thorough redesign of workflows and processes to help enhance effectiveness, thereby delivering the maximum value to the stakeholders. Numerous e-Governance initiatives are plagued with a mere automation of existing processes without the underlying business process re-engineering being carried out (Weerakkody, 2008; Kalsi, 2013). Hence it is advisable that prior to adoption of e-Governance, a re-engineering of the underlying process be carried out by the agencies to appropriately leverage and harness the potential of e-Governance.

2. Change Management

e-Governance requires for realignment of not only the supply side ie Government, but also the demand side ie citizens. Given the diversity of users in the e-Governance space, it poses a huge challenge (Belanger, 2006; Sarantis, 2010). Change management entails realignment in attitude towards service delivery while appropriately addressing issue like resistance to change, internal conflicts, bureaucratic structures etc. Further the change management in e-Governance should address the concern that e-Governance is a threat to jobs.

3. Trust

Trust is a set of expectations shared by all those in an exchange (Zucker, 1986). It while being a pivotal aspect for the exchange, has a major impact on the relationships between transacting groups (Pavlou et al., 2004; Warkentin et al. 2002). Drawing from the same, trust in e-Governance relates to the degree to which the actors believe that the desired results will be reaped, satisfactorily, using the e-Governance system. Citizens trust though necessary is not enough for the adoption and use of e-Governance. Further trust in e-Governance has two distinct dimensions: trust in information technology and trust in government (Teo et al., 2009).

C. Technological factors

1. Information & Communication Technology

The role of ICT infrastructure in e-Governance has been recognized worldwide in various studies. Since the backbone of any e-Governance solution is the ICT infrastructure, the extent of ICT development directly facilitates (or prevents) the delivery of services to its citizens (Ifinedo, 2012; Shareef et al. 2011; Srivastava & Teo, 2010) in terms of both reach and richness. Citizens in countries with higher levels of ICT penetration are also more likely to conduct their government-related affairs online (Singh et al., 2007).

2. Information Security & Privacy

The natural progression of e-Governance would but naturally require for a robust data protection mechanism and online payment system (UNDESA, 2014) and measures to prevent various types of cyber-attacks (Ebrahim, 2005; Rehman, 2010; Bwalya, 2013). Given the rise in internet based security and privacy breaches, Information security and privacy, poses an ongoing area of intervention.

D. Organizational factors

1. Human Capital

Human capital relates to the availability of required skills and knowledge amongst the staff to perform the services. It is likely to be a deal breaker, in terms of implementing better solutions and online services (Albusaidy et al.,2008). Such is the importance of human capital, that economists (Schultz, 1961) went to argued that human capital might be one of the critical reasons that explains the differences in growth between human beings as well as nations. Further, the human capital theory attempts to explain not only individuals' but also nations' behavior involving human capital, including the differential level of growth across countries rising from differences in human capital investment (Flamholtz et al., 1981). A sound national human capital base has been identified as a major enabler for realizing the benefits of e-governance (Srivastava et al., 2004; Von, 2004).

2. Ownership & Management

Effective e-governance development requires a comprehensive strategic planning along with IT leadership (Teo et al., 2006). Technology integration coupled with organization restructure and business reengineering facilitates implementation of e-business (Zhu et al., 2006). ICT-related innovation in government transformation projects should be seen as an on-going social process that unfolds in the context of complex negotiated relationships (Kling, 1999), hence a constant calibration is imperative for its successful life cycle management. Further, intelligent application of principles from existing systematic or systemic methods, which are finetuned to suit e-Governance initiative, would be an asset (Sarantis, 2009).

3. Localization

e-Governance initiatives are typically focused to service various strata of the society. While such strata may defer on various parameters, language is an obstacle that preventing citizens from using the e-services (Weerakkody, 2009). Hence localization is an important aspect that determines the adoption and utilization of e-Governance.
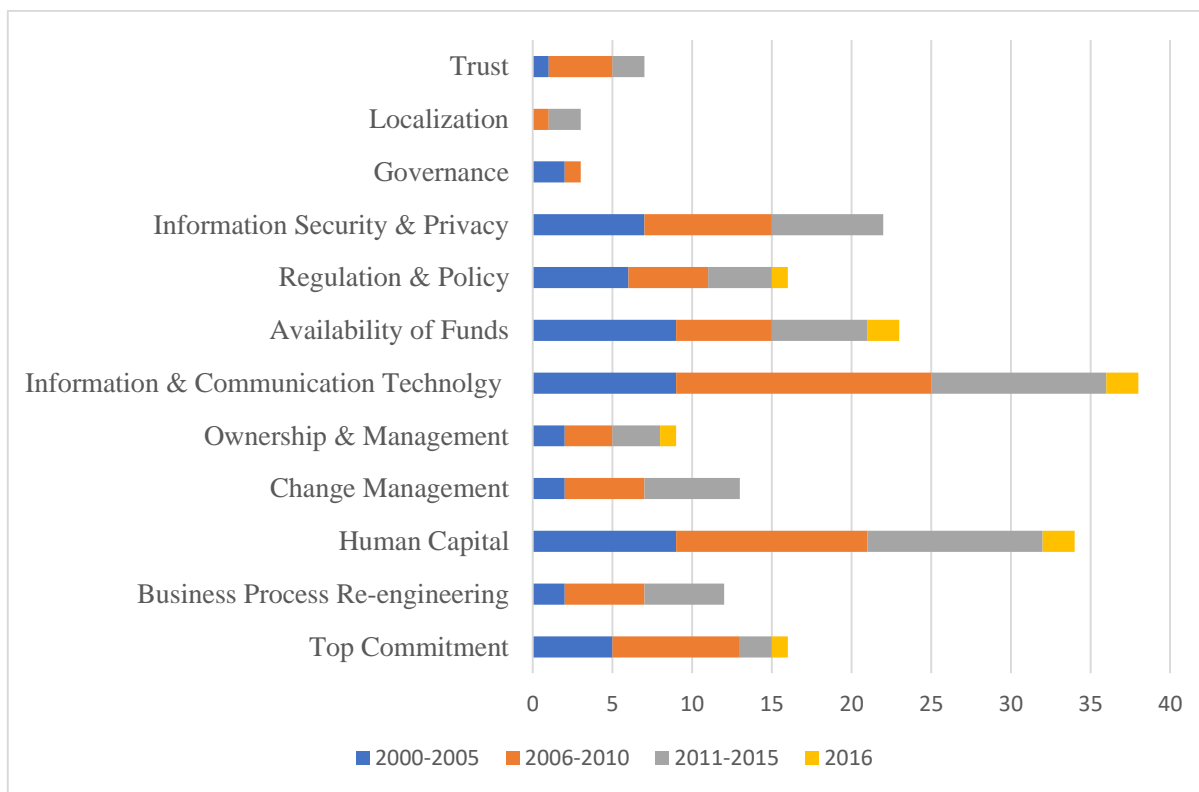
Figure 2: Factor identified in e-Governance – block year wise

Limitations and scope for future study

We acknowledge that this paper only reviewed articles published in sixty-five plus selected journals that covered the topic of e-Governance, which thereby is a research limitation. It is therefore recognized that in the future, more comprehensive research, covering a wider number of journals may be undertaken.

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