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Impact Assessment of E-Governance Projects-A Select Case of E-Mitra in South Rajasthan

Shubham Goswami
School of Management, Sir Padampat Singhania University, Bhatewar, Udaipur - 313601, Rajasthan, India

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IMPACT ASSESSMENT OF E-GOVERNANCE PROJECTS- A SELECT CASE OF E-MITRA IN SOUTH RAJASTHAN

Dr. Shubham Goswami*

ABSTRACT

India suffers from slow economic growth with less technology penetration. Government is using Internet and Communication Technology (ICT) as an opportunity to improve transparency and responsiveness towards delivery of services to its major stakeholder i.e. citizens. For future sustainability of e-governance projects, assessment of impact of these citizen centric services is important and should not be a onetime affair. The present study attempts to conduct an impact assessment of a G2C service called e-mitra in Rajasthan in comparison with manual delivery system. Results show that e-delivery system increases the responsiveness and transparency in system with low level of corruption but citizen rate e-mitra service low in the dimension of data security and complaints-handling mechanism. Citizen has negative perception towards scope of e-governance service but desire more investment in e-governance services. Research findings assist Government to diversify and simplify the process of delivery and provide insight in terms of impact, sustainability and scalability of project.

Key Words: e-governance, e-mitra, impact assessment, citizen perception

INTRODUCTION

India is known for its diversity with people from different cultures, traditions, languages and economic conditions. But a majority of population is below the minimal socio-economic benchmark and suffers a low penetration of telephone, PC, Internet and also with unreliable electric power supply particularly in rural

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* Dr. Shubham Goswami is Assistant Professor in the School of Management, Sir Padampat Singhania University, Bhatewar, Udaipur-313601, Rajasthan. E-mail: shubham.goswami@spsu.ac.in
Mobile: +91-9461347456

areas. Successive governments have recognized e-Governance (e-Gov) as an excellent opportunity for improving quality of government services to people, providing equitable access to all sections of society; improve monitoring and introducing administrative reforms. It harnesses information and communication technologies (ICT) like internet and mobile computing to transform relations with citizens, businesses and amongst various arms of governments. Governments' citizen centric governance plan focuses on three broad areas which include governance that improves transparency, people participation and public services that should be cost-effective and accountable to citizen (Madon S, 2003).

Government efforts for a citizen centric governance includes delivering services electronically which can be shared between citizen, business, government and employees. These form four models for e-governance as 1. Government to Citizen (G2C) model which refers to government services shared by citizen. These services include online payment of bills, online registration, digitizing land records, online complaint handling etc. 2. Government to Government (G2G) model includes services for exchanging information among government agencies used for application like storage, approval, budgeting purposes. 3. Government to Business (G2B) model create bond between private sector and government offices for sharing information regarding taxes, tenders, bill payment and complaint handling system.4.Government to Employee (G2E) model increases transparency between government and its employees by exchange of information like employee records, complaints, rule and regulations (Carter & Belanger, 2004).

Indian government has formulated an ambitious National e-governance Plan (NeGP) in year 2006 to cover all the important areas relating to e-Governance (e-Gov) like Policy, Infrastructure, Finances, Government Process Reengineering and Capacity Building across the Central and State Governments. NeGP is aimed at introducing e-Governance systematically through 27 Mission Mode projects, which would touch the lives of billions of people. But the lack of backend computerization of government department becomes the major challenge to integrate these heterogeneous computer systems working with different technical standards and architecture (Charag & Ahmed, 2013). Project that stresses on mere electronic presentation of content rather than on solving the governance issues become cumbersome. Keeping the complicated procedures unchanged will increase the citizen dependency on other intermediaries like computer operators. Localization of e-Gov initiatives is one on the prominent

hurdle in mass adoption. Moreover computerization of inefficient processes can lead to higher levels of inefficiency and cost (Bhatnagar et al., 2008).

In context of project evaluation, many times project objectives are defined in ICT terms like computers, network rather than ultimate business process outcomes for end users like citizens, which make the post implementation evaluation more difficult. The key mantra for success in citizen centric e-governance projects is 'citizen first'. So it become vital to assess the nature and quantum of impact on users to create a virtual feedback cycle by which the findings are sent back into the project conceptualization (Chandrashekar, 2008).

For the current study author use a case approach has been used and a G2C service in state of Rajasthan called e-mitra has been selected. The research identifies the e-Governance impact on its major stakeholder i.e. the citizens (clients) on key dimensions like cost of availing, quality of governance and service. The study explains the nature and degree of impact through contextual factors. The responses from clients are encapsulated by survey on the use of computerized system as well as the manual system (state government office). The study also analyzes thecitizen perception towards e-governance initiatives. The outcome of impact assessment study aims to present a benchmark guideline for service delivery for future projects.

About e-Mitra

e-Mitra project is an integral part of Rajasthan state e-governance framework which aims to provide a unified platform bringing government closer to citizens in a 'multi-service' to 'single-window' mode to offer all possible government information and services to rural and urban masses through e-enabled centers and kiosks implemented on PPP (public-private-partnership) model. Apart from increasing transparency and responsiveness, this model provide an integrated information approach for keeping all information at one place in an electronic form. This information base of e-Governance helps planners and decision makers to perform extensive analysis of stored data to provide answers to the queries of administrative cadre; which in turn helps them to formulate more effective strategies policies for citizen facilitation (Singhal, 2013).

There are two major components of the e-Mitra project. One is Back Office processing and the other is Service Counters. Back office includes computerization

of participating departments and district level data centre. Service counters or kiosks are placed where citizen avail the services related to multiple departments right from deposition of application to financial transaction to final deliverable collection. These counters are managed by private partners called Local Service Provider (LSP). For services that any government department wants to avail of, like bill/taxes collection and awareness generation, the payment of service charges will be made by the concerned department. While in case of services which are rendered on citizen's demand, e.g., Caste Certificate, Death/Birth Certificate etc. the payment will be made by the citizen himself. Beside government services, LSP are encouraged to offer private service like sale of insurance services, Internet café, Fax, mobile bill payment etc. Major stakeholders of this project are as given below in Table 1. Major role players in e-Mitra projects are citizens. Presently there are six LSPs (private partners) operating 425 kiosks in all 33 districts of Rajasthan (e-Mitra.gov.in).

Table 1: Major Stakeholders	
Stakeholders	**Role**
District e-Mitra Society	Main owner and driver of e-Mitra project in a district and appointing authority of LSP
District administration	Allow and allocate space for opening e-mitra kiosk
Participating departments	Provide base information in the form of printed manual data and in electronic format like master files, forms, procedures, etc.
Department of IT	Developer of the e-Mitra application software including database structures
e-Mitra Data Centre	Main hub for recording of all electronic transactions
Service counters	Owned or authorized by LSP. Work under a SLA (service level agreement)

LITERATURE REVIEW

The domain of electronic governance has received increased prominence and attention over the last few years. Even though many avenues in the area of e-Governance remain unexplored and one such area is the comprehensive assessment of projects. A large body of literature defended that 'ICT for development' and 'Bridging the digital divide' are the central driver for development in e-governance (Wade, 2002; Catells, 1998, Chiborra, 2002). ICTs in general and e-governance in particular offer tremendous opportunities for improving demand driven transparent and accountable service delivery targeting the underprivileged rural India (Kaur, S. and Mathiyalagan, N. ,2010). Reliey (2001) defined e-governance as a commitment to utilize appropriate technologies to enhance governmental relationships, both internal and external, support economic development and encourage the fair and efficient delivery of services. The term e-governance is primarily used to refer to the usage of IT to improve administrative efficiency, transparency, accountability of government processes and reduce corruption (Gasco, 2003, Proskuryakova, et

al., 2013). Recently, Elsa Estevez et al. (2013) proposed a framework for sustainable development with electronic governance.

The major challenge for a citizen centric solution is offering a hassle fee, easy-to-use, round-the-clock services to customers. Some researchers also analyzed that despite initial success of e-government projects often fail either totally or partially in achieving their objectives (Heeks, 2002, 2003a). In a study of a rural e-government project in India, Cecchini and Raina (2003) found that though service satisfaction was high but usage over time was low and the poorest people were not using the services. In another study of e-Gov in India, Subhash Bhatnagar (2008) reveals that awareness about the project can only help in bringing users to that service delivery channel once but it cannot guarantee sustained use of the system unless it is designed to encourage the use. Kolsaker et. al (2008) emphasized on the need of greater participation of common citizens in the decision making process in-order to ensure more transparency and efficiency e-Governance projects. He also emphasized on redesign of internal operations of government with developed e-Governance projects.

The design, acceptability and performance of any service delivery model is largely influenced by end user requirement and user feedback. Impact assessments conducted in a scientific manner do provide invaluable result for further refining the design of the subsequent e-governance projects and those results should be compared with the target set. With the increase of e-governance services and ICT based service initiatives by private sector and government makes the end user consultation easier (Kumar, 2008).Baseline surveys can help agencies understand the attributes on which project importance varies around states(Bhatnagar, 2008).User satisfaction level should also be measured on a year-to-year basis to maintain minimum service levels (Kumar, 2008).

The Government of India views e-Governance as a strategic tool for transforming Governance and improving the quality of services provided by the government to its people (Kumar R., 2012). But a vast majority of e-governance evaluation guidelines tend to focus on the supply-side benefits of ICT infrastructure and on the identification of constraints within the structure of institution (Madon, 2004). Heek (2001) based his analysis on preconditions needed at strategic and tactic level for e-governance in developing countries. Unnithan (2002) evaluate e-governance initiatives in south India which focus on the extent of network coverage and establishment of ICT infrastructure. Researcher also presented a three-dimensional

framework including maturity level, stakeholders, and different assessment levels for assessing initiatives post-implementation effects (José Esteves et al.,2008). Some studies discussed the impact of Indian e-governance projects on administrative reform and on changes in trust relation between government and citizens (Mandon, 2003; Charag, 2013). But there have been few data-driven studies focused on the impacts of projects over relatively long periods of time (Heeks, 2003a).

A number of empirical studies focus on ICT impact in improving the performance but majority of study use a heterogeneous framework to rate the success or failure of projects. So, it was difficult to compare the outcome for a project with other projects. Some studies focus on implementation success, some looked at long term sustainability and replicability of the project, some measured the benefits delivered to agencies but there are few studies that have focus on the benefits to clients.

RESEARCH FRAMEWORK AND METHODOLOGY

An impact measurement framework was developed after literature review and based on 'then' and 'now' comparison on selected parameters. A major part has been adopted from the existing framework that was used in earlier assessment study of eight projects encompassing service delivery to citizens (G2C), businesses (G2B) and internal staffs (G2G) in three states include Andhra Pradesh, Karnataka and Gujarat in 2008. The study was carried out by Indian Institute of Management, Ahmedabad (IIMA) and was sponsored by the World Bank, Department of Information Technology (DIT), Govt. of India (Subhash Batnagar et al., 2007). Indicators on which qualitative impact can be measured are also used in the present study.

The proposed framework (table 2) aims to measure the impact on qualitative and quantitative factors. Study also attempts to understand the citizen perception towards e-governance. Framework includes key areas of direct and indirect impact on citizens and some indicators on which qualitative impact can be measured. The study not only evaluates the functioning of the computerized system but also efforts to assess the difference made by use of ICT in manual and computerized delivery system.

Table 2: Research Framework

Source: Adopted from Report on 'Impact Assessment of e-Governance Projects', Department of Information Technology Ministry of Communications and Information Technology Government of

India, Retrieved From: http://deity.gov.in/sites/upload_files/dit/files/downloads/ ImpactAssessmentReportDraft.pdf, 2008

(a) Impact on Client

Dimensions
Cost of Availing
Number of trips to service centers
Direct or indirect service charges to client
Average waiting time
Number of documentation errors
Bribe payment to functionaries
Number of documents required
Quality of Governance
Level of corruption
Feedback by agency and its implementation
Level of accountability
Rules and procedures are stated clearly
Quality of Service
Work timings
Responsiveness of staff
Data security
Location of service center
Functionaries courteous and friendliness
Timeliness of response
Satisfaction with complaint handling mechanism

(b)Perception on e-Governance Initiatives

Dimensions
e-Governance improve the image of the government
Government should make more investments on e-governance initiatives
e-Government services benefits to all (rich/poor and rural /urban)

DEVELOPMENT OF HYPOTHESES AND DATA COLLECTION

In the current study, magnitude of impact has been measured on three dimensions which include cost of availing, Quality of governance and quality of service. To measure the impact and analyze the citizen perception, following hypothesis has been developed as:

H1: There is no difference in cost of availing the services at e-mitra centers and manual system

H2: Quality of governance in e-mitra and manual system are equal

H3: There is no difference in Quality of service for e-mitra and manual system

H4: Citizens have favorable perception towards e-governance services

In order to examine the hypothesis, a final questionnaire was developed and pre-tested for reliability. To test the reliability, the prepared questionnaire was presented

to 10 respondents consisting of students pursuing higher education, and faculty members of the university. The pre-tested questionnaire was further, advanced to conduct survey from the identified survey pool. A sample size of one hundred eighty was selected by applying convenience and judgmental sampling technique, and data was collected through survey method. A survey pool comprises of citizens availing the e-mitra services and also had the experience of manual delivery system in Udaipur and Chittorgadh district of Rajasthan State. Respondent profile is presented in table 3. The respondents are largely urban, educated, employed or business people. For majority of questions respondents are asked to rate the manual and computerized systems in a 5 point scale. The last section of questionnaire measures client perception towards government initiatives of e-delivery projects.

Table 3: Respondent Profile, n=180

Attributes		% of respondent
Education	Schooled	10%
	Graduate	66%
	Post-graduate	24%
Profession	Private/ public sector employee	40%
	Business	46%
	Farmer	14%
Gender	Male	84%
	Female	16%
Urban/Rural	Urban	86%
	Rural	14%

RESULTS & ANALYSIS

This section deals with the testing of hypotheses by using appropriate statistical tools. SPSS-19 software has been used for the purpose of analyzing responses gathered.

Testing of H1

H1: There is no difference in cost of availing the services at e-mitra centers and manual system

In order to test this hypothesis, a questionnaire gathered the average waiting time for the service. Mathematical statement of null hypothesis on the dimension of average waiting time is as follows:

$H_{0:}\ \mu_E = \mu_M$ Where, μ_E and μ_M are the hypothesized mean for e-mitra and manual system services respectively.

$H_1:\ \mu_E \neq \mu_M$

The statistical significance of the data has been tested using Student's paired sample "t" test at 95% confidence level. It was found that gap is statistically significant ($t_{average\_waitTime}= -11.344$, p = .000 < .05). Since our Paired Samples Statistics box revealed that the Mean wait time for manual system is greater than the Mean for e-mitra center, we can conclude that average waiting time of manual system is higher than e-mitra systems.

Table 4: Paired t test for 'Cost of Availing'

Paired Samples Statistics				
	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Avg waitTime E	11.9000	180	4.27260	.60424
Avg waitTme M	31.1000	180	11.83604	1.67387

Paired Samples Test								
	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 Avg_waitTime_E - Avg_waitTime_M	-19.20000	11.96764	1.69248	-22.60117	-15.79883	-11.344	179	.000

Values for other scale items for measuring cost of availing are captured as Boolean variables of yes/no. Results summarized in table 5 and figure 1, shows that large section of sample is able to finish their job in one trip with less documentation errors and by paying less service charge and bribe.

Table 5: Responses on the various attributes, n=180

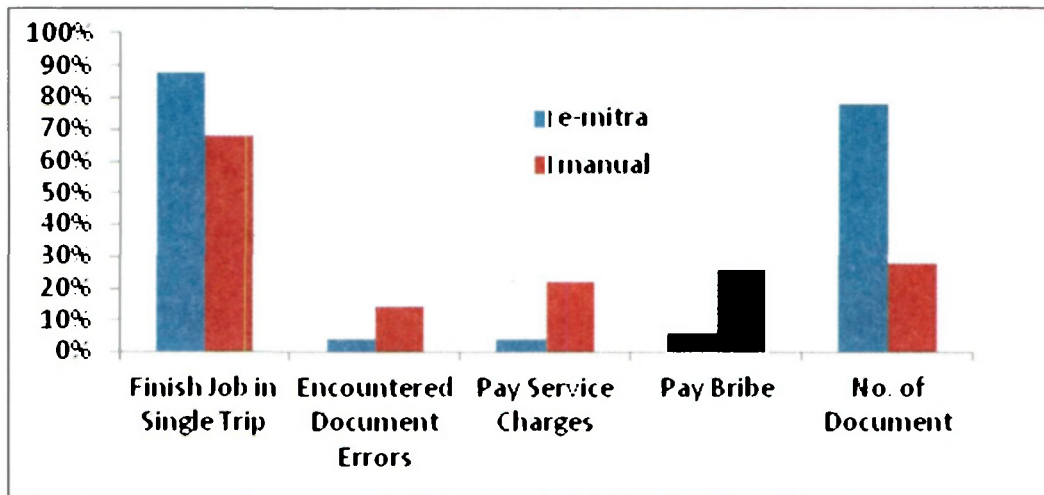|	% of respondent	
Attributes	e-mitra	manual
Finish Job in Single Trip	88%	68%
Encountered Document Errors	4%	14%
Pay less service Charges	4%	22%
Pay Bribe for work	6%	26%
No. of Document required *(upto 2)*	78%	28%

Figure 1: Graphical representation of responses

Testing of H2

H2: Quality of governance in e-mitra and manual system are equal

In order to test this hypothesis, the attributes configuring quality of governance are included. Level of corruption in both manual and computerized delivery system in tested; clear statement of rules and procedure in e-mitra centre are measured. Deliberation of suggestion given by citizen in both kinds of service centres has been taken into account. Dimensions are measured in 5-point scale. For measuring level of corruption 1 denotes for 'very corrupt' and 5 is used to indicate 'not at all corrupt'. To gauge statement of rules and procedures scale value 1 indicate 'Not at all clear' and 5 for 'Very much clear'. To identify and estimate implementation of suggestion provided by citizen 1 in the scale specifies 'Never' and 5 is for 'always' response.

Mathematically, a general statement of null hypothesis has been expressed as below:

$H_0: \mu_E = \mu_M$ Where, μ_E and μ_M are the hypothesized mean for e-mitra and manual system services respectively.

$H_1: \mu_F \neq \mu_M$

The statistical significance of the data has been tested using Student's paired sample "t" test at 95% confidence level. It was found (table 6) that the mean difference is statistically significant for the dimension of 'Level of corruption' and 'Implementation of suggestion' ($t_{Lvl\_corruption} = 2.436$, p = .019 < .05; $t_{Suggestion\_Imp} = 11.809$, p = .000 < .05). But there is no statistically significant difference for the dimension of 'Clear Statement of rules and procedure' ($t_{procedure\_stated} = .715$, p = .478 > .05).

The sample statistics reveal that the level of corruption is comparatively more in manual system than e-delivery model. Moreover, citizen believes that suggestions are adequately implemented in e-mitra centre compared to the manual setup. It has also been found that 82 percent of citizen provides feedback to officials of e-mitra centers in contrast to 38 percent for manual setup.

Table 6: Paired t test for 'Quality of Governance'

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Lvl corruption E	3.6600	180	.82338	.11644
	Lvl corruption M	3.3000	180	.88641	.12536
Pair 2	procedure stated E	3.6400	180	.85141	.12041
	prcedure stated M	3.8000	180	1.16496	.16475
Pair 3	Suggestion Imp E	3.9400	180	1.13227	.16013
	Suggestion Imp M	1.7200	180	1.12558	.15918

		Paired Samples Test						
		Paired Differences						
					95% Confidence Interval of the Difference			
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	Df	Sig. (2-tailed)
Pair 1	Lvl_corruption_E - Lvl corruption M	.36000	1.04511	.14780	.06298	.65702	2.436	179	.019
Pair 2	procedure_stated_E - prcedure_stated_M	.14000	1.38520	.19590	-.25367	.53367	.715	179	.478
Pair 3	Suggestion_Imp_E - Suggestion Imp M	2.22000	1.32926	.18799	1.84223	2.59777	11.809	179	.000

Testing of H3

H3: There is no difference in Quality of service for e-mitra and manual system

Quality of service is tested on the dimensions including Work timings, Responsiveness of staff, Data security, Location of service center, Functionaries courteousness and friendliness, Timeliness of response, Satisfaction with complaint handling mechanism. Dimensions are measured in 5-point scale. Mathematically,

H_0. $\mu_E = \mu_M$ Where, μ_E and μ_M are the hypothesized mean for e-mitra and manual system services respectively.

H_1: $\mu_E \neq \mu_M$

It was found from table 7 that statistical mean difference exists in the dimensions of accessibility, working hours, friendliness of functionaries ($t_{accessibility}$=3.031, p=.004<.05; $t_{working\_hour}$=3.133, p=.003<.05; $t_{friendly}$=2.795, p=007<.05) , but mean difference is not statistically significant for the dimensions including Timeliness of response, Data security, Data Confidentiality and complaint handling mechanism between the e-mitra and manual system ($t_{Timely\_Handling}$=.688, p=.495>.05; $t_{data\_confidentiality}$ =.822, p=.415>.05; $t_{data\_security}$=-1.011, p=.317>.05; $t_{compliant\_handling}$=-1.492,p=.142>.05).

It is clearly inferred from the above statistics that citizen are still worried about their data security and confidentiality in computerized service centers. There seems to be no difference in time taken to respond to a query or service in both manual and computerized setup. Moreover, citizens reported same attitude towards complain handling mechanism in both the systems. These findings can significantly damage the credibility of e-mitra centre, as their primary objectives include timely and accurate delivery of e-governance services along with assurance of security and confidentiality of citizen data.

Table 7: Paired t test for 'Quality of Service'

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Accessibility_E	3.9200	180	.63374	.08963
	Accessibility M	3.4600	180	.81341	.11503
Pair 2	working_hour_E	3.8800	180	.55842	.07897
	working hour M	3.4400	180	.81215	.11486
Pair 3	Friendly_E	3.9000	180	1.05463	.14915
	Friendly M	3.3400	180	.96065	.13586
Pair 4	Timely_Handling_E	3.8400	180	1.13137	.16000
	Timely Handling M	3.5600	180	2.92882	.41420
Pair 5	Data_Confidentiality_E	3.5200	180	1.34377	.19004
	Data Confidentiality M	3.3600	180	1.08346	.15322
Pair 6	data_security_E	3.2000	180	1.53862	.21759
	data security M	3.4800	180	1.23288	.17436
Pair 7	Compliant_handling_E	2.5600	180	1.37262	.19412
	Compliant handling M	2.9600	180	1.15987	.16403

		Paired Samples Test							
		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Accessibility_E - Accessibility_M	.46000	1.07305	.15175	.15504	.76496	3.031	179	.004
Pair 2	working_hour_E - working hour M	.44000	.99304	.14044	.15778	.72222	3.133	179	.003
Pair 3	Friendly E - Friendly M	.56000	1.41652	.20033	.15743	.96257	2.795	179	.007
Pair 4	Timely_Handling_E - Timely_Handling_M	.28000	2.87878	.40712	-.53814	1.09814	.688	179	.495
Pair 5	Data_Confidentiality_E - Data Confidentiality M	.16000	1.37559	.19454	-.23094	.55094	.822	179	.415
Pair 6	data_security_E - data security M	-.28000	1.95918	.27707	-.83679	.27679	-1.011	179	.317
Pair 7	Compliant_handling_E - Compliant handling M	-.40000	1.89521	.26802	-.93861	.13861	-1.492	179	.142

Testing of H4

H4: Citizens have favorable perception towards e-governance services

To test this hypothesis, a questionnaire was developed using five point Likert Scale (1 for strongly disagree and 5 for strongly agree) on attributes explaining perception of citizen towards e-governance services. These attributes include dimensions like whether e-governance project improve the government image among citizens; government should make more investments on e-governance initiatives and whether the scope of e-Government services is limited to rich, influential urban citizens. The statistical significance of the data has been tested using student't' test at 95% confidence level.

Mathematically,

H_0: $\mu = 4$

H_1: $\mu \neq 4$

Where 4 is the scale value corresponds to "agree" category. Responses greater and equal to 4 reflect a positive and favorable citizen perception towards e-governance services. The statistical difference between the actual mean value of each dimension and test value i.e. 4 is tested by using one sample t-test.

Table 8: Perception towards e-governance service

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Improve image	180	3.6800	.91339	.12917
more investment	180	3.9800	.68482	.09685
benefit rich	180	3.4200	1.10823	.15673
benefit rural	180	3.4800	.90891	.12854

One-Sample Test						
	Test Value = 4					
					95% Confidence Interval of the Difference	
	t	Df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Improve image	-2.477	179	.017	-.32000	-.5796	-.0604
more investment	-.207	179	.837	-.02000	-.2146	.1746
benefit rich	-3.701	179	.001	-.58000	-.8950	-.2650
benefit rural	-4.045	179	.000	-.52000	-.7783	-.2617

The output of 't' test (2-stailed) in table 8 reveals that no significant gap exists between the hypothesized test values with the calculated sample mean statistics for only one dimension of 'more investment' ($t_{more\_investment}$=-.207,p=.837>.05) . Thus, the perception of the citizen towards e-governance corresponds to remaining attributes tend to be unfavorable and dichotomous.

Service usage pattern

Table 9 below provides details about the most availed service at e-mitra service counters. Almost all respondent reported that their most frequently used service include payment of electric and water bill, Payment of mobile bill. Services like issue of caste certificate, dish TV recharge, payment of exam fees and installment deposits of life insurance are less popular and availed services. But it is significant to find that majority of services are not citizens.

Table 9: The most frequently used service, n=180

Sr.	Service Name	% of respondent
1	Payment of Electricity bill	100
2	Payment of water bill	100
3	Payment of BSNL Bill (WLL, mobile, landline)	78
4	Caste certificate (OBC, SC/ST)	28
5	Dish TV recharge	20
6	RPSC exam fee	16
7	Board of secondary education answer booklet copy	14
8	Board of secondary education answer booklet copy	14
9	ICICI prudential life insurance FSO/new application	2
10	Police exam form / fee payment	2
11	Exam fees from Panchayati raj	0
12	PWD exam form / fee payment	0
13	Rajasthan Guaranteed Delivery of Public service application	0
14	Bus pass (Udaipur transport limited)	0
15	LSP deposits (District e-Gov societies)	0

CONCLUSION

Computerization of service delivery in India is in the early stages of evolution. Most government department is still struggling to digitize their data and service counters. Citizen satisfaction and perspective has been always a critical success factors for a citizen centric e-governance projects. It becomes important to assess the quantum of impact on end users for such e-delivery services. Moreover, the impact assessments are not going to be one time affair and the project may be measured again and again in definite interval. Clear guidelines should be provided to encourage the end users and reduce users' dependence on intermediaries. The present study attempts to measure this impact on various qualitative and quantitative factors for the chosen case of e-mitra. The degree of impact has been gauge on the key dimensions of cost of availing services, quality of governance and quality of service. The responses are captured for both computerized and manual delivery systems.

Citizen seems to be satisfied with e-mitra centers in terms of cost saving dimensions, like access, number of trips to service centers, waiting time, less documentation errors along with working hours, friendliness of functionaries and low level of corruption. But these services face limitations in context of response time, citizen data security and confidentiality and indolent complain handling mechanism. These issues defeat the basic motive of these e-services to increase the responsiveness and transparency in delivery system and can considerably damage the credibility and

sustainability of e-mitra centre in Rajasthan. The findings also report that the total portfolios of services provided by e-mitra centers are not fully availed by citizens. There are only few popular services like payment of electric and water bills which drive the business revenue for these centers. Governments should launch an awareness campaign for less availed service to help the financial sustainability of small centers. Citizen shows a positive perception on encouraging government to make more investment on e-governance projects. However, citizen does not believe that such initiatives would enhance government image. This may be because they are still very cautious about data and transaction security issues in government computerized setups and perceive that these services are only meant for rich, urban and well educated citizens. These findings assist Government to diversify and simplify the process of delivery, enhance sustainability and scalability of project.

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Survey Instrument: Questionnaire

Name of Respondent: Age:

Education: Gender:

	Please select (✓) the frequently used service at your e-mitra center
1	Payment of Electricity bill
2	Payment of water bill
3	Payment of BSNL Bill (WLL, mobile, landline)
4	Dish TV recharge
5	ICICI prudential life insurance FSO/new application
6	Caste certificate (OBC, SC/ST)
7	Board of secondary education answer booklet copy
8	Exam fees from Panchayati raj
9	RPSC exam fee
10	Police exam form / fee payment
11	PWD exam form / fee payment
12	Board of secondary education answer booklet copy
13	Rajasthan Guaranteed Delivery of Public service application
14	Bus pass (Udaipur transport limited)
15	LSP deposits (District e-Gov societies)

Source: http://emitra.gov.in/

	e-mitra	Manual
Please provide the following details of any one services that you have availed from e-mitra center with respect to manual system		
How far is e-mitra service from your residence?		
Cost of Availing		
I finish the job in single trip (Yes/No)		
Average waiting time in each trip (in minutes)		
Did you come across any error in the document received? (Yes/No)		
Do you pay any service charge? (Yes/No)		
Did you pay bribe to center/office staff? (Yes/No)		
Less number of documents submitted for availing the service? (upto 2) (Yes/No) **Quality of Governance**		
Please estimate the level of corruption in the working of the system. Very corrupt-1; Somewhat corrupt-2; Neutral-3; Somewhat less corrupt-4; Not at all corrupt-5		
Are the rules and procedures stated clearly Not at all clear-1; Somewhat unclear-2; Neutral-3; Somewhat clear-4; Very clear-5.		
Do you give any feedback to officials? (Yes/No)		
Do you think suggestions are implemented? Never-1; Rarely-2; Sometimes-3; Very often-4; Always-5 **Quality of service** Are you satisfied with the present location of the center/office? Very dissatisfied-1; Somewhat dissatisfied-2; Neutral-3; Somewhat satisfied-4; very satisfied-5	e-mitra	Manual
Are the working hours of the center/office convenient?		
Not at all Convinient-1; somewhat inconvenient-2; Neither convenient nor inconvenient-3; Somewhat convenient-4; Very convenient-5		
Are the functionaries courteous and friendly? Never-1; Rarely-2; Sometimes-3; Often-4; Always-5		
Do your service requests/queries are handled timely? Never-1; Rarely-2; Sometimes-3; Often-4; Always-5		
Are you satisfied with the level of confidentiality of data? Very dissatisfied-1; Somewhat dissatisfied-2; Neutral-3; Somewhat satisfied-4; very satisfied-5		
Are you satisfied with the level of security of data? Very dissatisfied-1; Somewhat dissatisfied-2; Neutral-3; Somewhat satisfied-4; very satisfied-5		
Are you satisfied with complaint handling mechanism? Very dissatisfied-1; Somewhat dissatisfied-2; neutral-3; Somewhat satisfied-4; very satisfied-5.		

User perception on e-Governance					
	Strongly Disagree	Disagree	No Idea	Agree	Strongly Agree
Implementation of e-governance applications has helped to improve the image of the government					
Government should make more investments on e-governance.					
Computerisation of Government services benefits only the rich and influential					
Rural citizens benefit greatly from computerization of Government services.					

Any additional information/suggestion you would like to provide which will add value to this exercise.

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