iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** III **Month of publication:** March 2021

DOI: https://doi.org/10.22214/ijraset.2021.33428

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue III Mar 2021- Available at www.ijraset.com

Adoption and Implementation of E-governance for Administration and Service Delivery in Urban Development & Municipal Affairs Department of State sector of West Bengal and its Challenges

Mr. Chandrajyoti Sen Majumder[1], Dr. (Mrs.) Santwana Chaudhuri[2]
[1]*Research Scholar, JIS University, Kolkata,*
[2]*(Senior Mentor, Business Management, JIS University, Kolkata*

Abstract: ***This paper has been written with a presumption that E-governance has been successfully accepted in the Urban Development & Municipal Affairs Department in the state sector of West Bengal due to wide awareness among major portions of the government employees. The objective of the paper is to assess the success of such ongoing E-governance projects in the Urban Development & Municipal Affairs Department and list the sources of impediments which are negatively influencing the successful implementation of E-governance and review several influencing factors such as Politics, Awareness of Bureaucrats, Citizens' Acceptance and State-Central Relationship which has affected the growth or created challenges in implementation of E-governance. The paper therefore predicts some factors which are required to be either avoided or welcomed for attaining success in implementing E-governance***

This research paper has made a confirmatory factor analysis of the primary information to deduce how much the respondents among the employees of the Department agree with the proposed objective of the research, that is, how they perceive that the challenges of implementation E-governance projects can be successfully overcome through proper planning and subsequently how such successful steps towards E-governance project implementation can be adopted for future projects by different State sectors in West Bengal.

The paper concludes that there are uneven demands of E-governance in different departments and not all the challenges can always be overcome by the government. There is a clear requirement of establishing a system on Training and Development for future innovation and successful E-governance in the Urban Development & Municipal Affairs Department of the government of West Bengal.

I. INTRODUCTION

Globalisation is translating into exchange of technology among all sectors, private and public. There is a global shift towards use of Information Technology. Government agencies are using different Information & Communication Technologies (ICT) as tools to transform government as well serve citizens, businesses and other departments of government itself.

However over decades, in India, globalization in exchange of technologies for excellence, innovation and upgradation of information technology and use of ICT for benefits of common people had remain a trend of the private sector; but with government initiatives such as development of National E-governance plan, introduction of e-Kranti and Digital India concepts and relentless campaigns of such initiatives have seen changes in practice among public sectors delivering services.

Government of different nations have started using information technology (IT) in general and the Internet in particular to their advantage since the last 10 to 15 years, in order to improve governmental administration and communication with their citizens. It is true that E-governance is slowly but surely making a steady impact in the life of a common Indian in his everyday life. Global shifts towards increased deployment of different means and ways engineered by Information Technology by governments emerged in the nineties with the goals of meeting success in quick and novel ways; this was more achieved with the advent of the World Wide Web or the Internet.

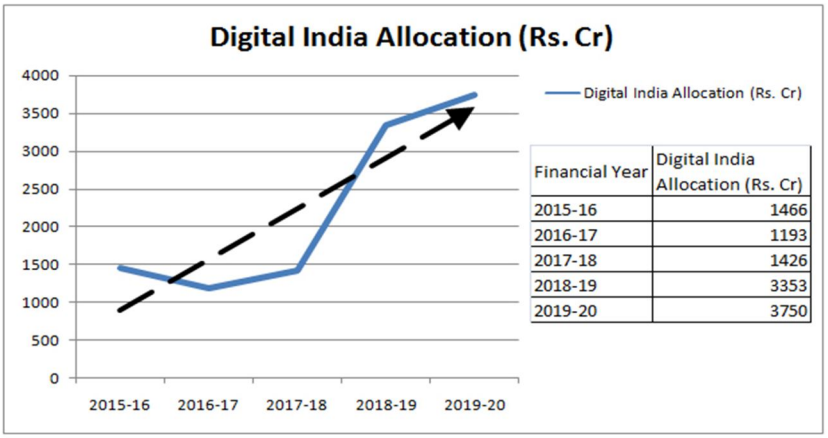
The concept of E-governance has its origins in India only during the seventies with a focus on development of in-house government applications in the areas of defence, economic monitoring, planning and also the use of IT to control different database intensive functions in relation to services like elections, census, tax administration etc.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue III Mar 2021- Available at www.ijraset.com

There have been several major corporate governance initiatives launched in India since the mid-1990s. The first was by the Confederation of Indian Industry (CII) who came up with the first voluntary code of corporate governance in 1998. The second was by the SEBI. In India, the E-governance initiative has started via what is known as the National E-governance Plan (NeGP) which was later christened as Digital India initiative and is a compendium of several policy initiatives and a comprehensive framework of ICT for implementing E-governance. The E-governance started making its impact felt in India with the development of the Institution called National Informatics Centre (NIC) in the late 20th century and followed by the launching of National E-governance Plan (NeGP) in the early 21st century. The efforts of the National Informatics Centre (NIC) in India to connect all the district headquarters during the eighties was a very noteworthy step taken towards E-governance. In 1999, the Union Ministry of Information Technology was created. By 2000, a 12-point minimum agenda for E-governance was identified by Government of India for implementation in all the Union Government Ministries/Departments. Finally, in 2006, National E-governance Plan was launched by the central government of India.

In the last 5 years the central government of India also continuously increased budget allocation towards Digital India suggesting government's interest in adopting information technology based digital services for citizens.



Financial Year	Digital India Allocation (Rs. Cr)
2015-16	1466
2016-17	1193
2017-18	1426
2018-19	3353
2019-20	3750

Government run E-governance service deliveries actually presents the opportunity to take public nearer to their government and regardless of the type of political system in the country, the citizens' benefit from interactive features that facilitate communication between citizens and governments.

In India on July, 2015 the newly elected Government of India launched Digital India campaign and e-Kranti aiming to make all government services accessible to the citizens through common service delivery outlets. Since 2010, Government of India is regularly spending a major share of the national budget in developing ICT infrastructure. In FY 2011-12, Department of Information Technology spent Rs. 259 Crores towards E-governance; In FY 2012-13, the spending was Rs. 424 Crores; In FY 2013-14, the spending increased to Rs. 700 Crores; In FY 2014-15, Govt. of India made a pan-India launching of Digital India with a Rs. 500 Crores outlay. From 2015 onwards, however, Government of India decided to delink E-governance as a centrally sponsored scheme and state governments are entrusted upon with shared investments for research and development, innovation and building infrastructure.

In the light of this, Government of West Bengal is trying to roll out all government schemes through E-governance service and match international standards in terms of service delivery quality. It has successfully implemented a number of E-governance projects to establish quick, error free and real-time connection across all Gram Panchayats, Municipalities, Blocks, District Collectorate Headquarters, Department Head offices, Directorate Headquarters and the State Secretariat. The target is to convert the entire network of State Secretariat, Directorates and Regional offices into complete e-offices and ensure all the citizen-centric services under a single window portal within 2021.

The Government is sincerely committed to develop an inclusive, citizen friendly and information-based society in order to make the public services readily available to all sections of the people in the State in an efficient and transparent manner, through E-governance, with the use of Information and Communication Technology (ICT). In order to move ahead with this noble mission, the West Bengal Government has undertaken a number of E-governance projects in tune with the National E-governance Plan (NeGP) as well as the Digital India Initiatives with the technical support from Webel Technology Limited (WTL) which is the State Designated Agency (SDA)

©IJRASET: All Rights are Reserved

A. *Significance of the Study*

This paper has the objective to assess the success of ongoing E-governance projects in urban development department in the state sector of West Bengal and list the sources of impediments which are negatively influencing the successful implementation of E-governance by the government and therefore predict factors to avoid or welcome for attaining success in implementing E-governance. This paper has made an effort to review several influencing factors which has affected the growth or created challenges in implementation of E-governance, such as, (i) Politics (or changing face of politics), (ii) Awareness of the bureaucrats (or degree of consciousness while delivering services by Govt. officials), (iii) Citizens' acceptance, and (iv) Relationship and resultant coordination between the central govt. and the state govt. in implementing E-governance in a federal country like India.

II. LITERATURE REVIEW

In the book, *E-governance in India: Initiatives and Issues*, published in 2006 R.P. Sinha wrote that the last decade of the 20th century saw a very rapid development and spread of the Information and Communication technologies with the advent of user-friendly computing and networking.

Prof. Vikram Singh in his book *Impact of Information and Communication Technology on public life* published in 2009 said that even the greatest critic of the Internet, the Council of Torah Sages (the Israeli ultra-orthodox Sephardic and Mizrahi Shas Party) see benefits in the technology, and its words are considered as an example of negative appraisal like, the council describes the addiction to Internet is 1000 times more dangerous than television and also it is the world's leading cause of temptation etc. Yet it is said here that it is not just the differences in value system that determines one's appraisal of a technology like Internet but such an appraisal is also determined by one's empirical understanding of how the technology works what its consequences and implications are.

Bidisha Chaudhuri in her book *E-governance in India: The Interplay of politics, Technology and Culture* in 2012 described that in India E-governance and new technological adoption is an endless negotiation and conscious hybridization of politics, technology and culture. In their book, *Stakeholder Adoption of e-Government Services: Driving and Resisting factors*, in 2011 McMaster University Prof. Shareef, MA, Carleton University Professor duo Kumar V and Kumar U, rightly pointed that, E-governance is most important to the common people of the country i.e. the citizens, and the most popular service in E-governance is Government-to-Citizens. In their book, *Strategic Planning and Implementation of E-governance* published in 2016, P.K. Suri and Sushil has mentioned that even though the National E-governance Plan and the 2nd Administrative Reforms Commission ARC report of India emphasized on reengineering of the government processes and rationalization of the organizational structures, there are only a limited number of E-governance projects where such an approach could be said to have been methodically adopted. It has also been mentioned in the books that with the rising expectations of end users who get accustomed to new technology over a period of time, the original scope or objective of the government E-governance projects fall short of matching the growing levels of expectations. Moreover, with limited resources and rigid governance frameworks, the government is often found wanting in responding to emerging demands of citizens. Malik Poonam, Dhillon Priyanka and Verma Poonam (2014), in the research paper titled *Challenges and Future Prospects for E-governance in India* as published in International Journal Science, Engineering and Technology Research discussed the challenges faced by E-governance, strategic challenges of e-readiness and lack of ICT infrastructure in developing countries like India etc. Paramashivaiah P. and Suresh B.K. (2016), in the research paper titled *E-governance: Issues and challenges in India* as published in International Journal of Sustainable Development explores the theoretical assumptions about e governance by studying the some of the successful projects implemented by the various states in India to reveal that though wider scope is there for implementation of projects nationwide unable to implement because lack of infrastructure facilities, technology feasibility, financial feasibility and huge investments.

Dr. Vibhuti and Dr. Tyagi Ajay Kumar (2017) in their research paper titled *E-governance in India – Concept, Challenges and Strategies* as published in International Journal of Science, Technology and Management discussed in developing countries like India there are many challenges in front of Government in implementing E-governance services through internet since most part of the population is below poverty line and even literacy rate towards IT services is also very less. Hence it is a challenge for the implementing agencies in India.

A. *Gap Area Analysis*

In light of the Scope of the study taken to review the sources of impediments which are negatively influencing the successful implementation of E-governance and review several influencing factors such as Politics, Awareness of Bureaucrats, Citizens' Acceptance and State-Central Relationship which has affected the growth or created challenges in implementation of E-governance, it has been observed, no such research study has been so far carried out in West Bengal and in the state sector of Urban Development & Municipal Affairs Department of the government of West Bengal.

©IJRASET: All Rights are Reserved

This research paper has made a confirmatory factor analysis of the primary information to deduce how much the respondents within the sample set agrees with the proposed objective of the research, that is, how the challenges of implementation E-governance projects can be successfully overcome through proper planning and subsequently how such successful steps towards E-governance project implementation can be adopted for future projects by different State sectors in West Bengal. To add to this, the research paper also consolidates and focuses on other pertinent studies wherefrom most of the identified relevant information have been examined, statistically analysed from relevant perspectives and those have rendered auxiliary support to the research in conceptualising the new context. Cross-sectional data have been collected from the specific State sector i.e. Urban Development & Municipal Affairs Department and within the specified time period of 10 years between 2006 and 2016, for generating statistical analysis and generalisation of finding for this research within its limited scope. In furtherance to the research, the paper also has a target to offer a remedial pathway to overcome the identified and listed challenges for future implementation of E-governance.

B. Research Objective

1) Identifying factors that are responsible to create challenges behind implementing E-governance programs in the Urban Development & Municipal Affairs Department
2) Identifying the different ways in which those challenges are hindering the growth or success of E-governance in these sectors
3) Identifying the different ways to overcome these challenges

C. Research Hypotheses

1) *H-1:* A major portion of the employees in the concerned Govt. sectors has a significant role in being sufficiently aware about technology, This Hypothesis has been conceptualised has this researcher believes that with the turn of the newer, stronger and robust IT policy in place, it has become utmost important for the government employees in the State Sectors of West Bengal to become aware on IT and E-governance run projects
2) *H-2:* E-governance needs have significant role for being not equally high in all of these Govt. sectors, This Hypothesis has been conceptualised with the view that the statement on equal highness in demand as per the Hypothesis is a comparative term as sometimes, the services provided by governments in some circumstances are proved to be inadequate, unreliable and expensive while in other cases citizens may not have right access, awareness, capacity etc. to avail the service delivery or reach out to the offerings.
3) *H-3:* Challenges and impediments of E-governance has a significant role in being short-term and can be overcome in the long-term. This Hypothesis has been conceptualised as per the researcher's perception that even though there are challenges remained in implementation of E-governance but still considerable progress has been made in implementing E-governance and so it is not incorrect to believe that the challenges whatsoever are ultimately overcome in the long run and it is possible to implement successful E-governance projects which can serve better service deliveries

D. Research Questions

1) *X-1:* Do computerization and E-governance promotes service deliveries as smarter, faster and more empowered methods?
2) *X-2:* What are the influencing effects of the success/failure of the implemented E-governance?
3) *X-3:* Do E-governance projects are tasting success in all the Govt. departments/sectors?
4) *X-4:* Do successful service deliveries by E-governance influencing users to participate in further Training and Development for future innovation?
5) *X-5:* How the acceptability/popularity quotient of particular program helps in the trust building and influence mental satisfaction in other departments' workers in similar environment?

E. Research Methodology: Coverage, Data Collection, Sample, Data Analysis

1) *Coverage:* Cross-sectional data has been collected only from West Bengal urban areas and for a specific time period between 2006 and 2016.
2) *Data Collection:* The sample population consists – The Urban Development Department along with organizations under this department viz. (1) Directorate of Local Bodies, (2) Municipal Engineering Directorate, (3) State Urban Development Agency, (4) Institute of Local Govt. and Urban Studies, (5) West Bengal Valuation Board; as well as 125 Urban Local Bodies/Municipal Bodies all over West Bengal. The officials, only at the managerial level and above have been considered. Personal interviews and Survey through Questionnaires with the officials at the Managerial level has been the primary source of data.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue III Mar 2021- Available at www.ijraset.com

III. DATA ANALYSIS

Primary Data was collected for the span of 10 years. A Time-Series Analysis has been performed to analyse the success trend of E-governance. The officials who are working with different successful E-governance projects in West Bengal have been interviewed and their projects' performance in the limited scope of this research has been researched. Different officials working in the different Development Authorities under Urban Development & Municipal Affairs' Department has been interviewed to seek information on successful implementation of online Landuse Development & Control Planning system, online Water Connection sanctioning and Building Plan sanctioning system which directly involves citizens.

It has been identified by the Researcher that the Municipal Affairs' Dept and 5 companies underneath it is undergoing a change with E-governance implementation in some forms or others. For example, this government department is providing E-governance as a part of Govt-to-Citizen services under which a system was build to provide online, Birth & Death Certificates and Trade Licenses at municipal areas by all 125 municipalities of West Bengal; The policy of adopting E-governance for all the municipalities was initiated in 2005-2006 when Municipal Affairs' Dept and Ministry of Economic Affairs and Urban Development Department (Govt. of India). Research information was collected from the above mentioned directorate and 5 of its companies/councils.

The results from Interviews and Surveys have been studied through confirmatory factor analysis process to reach to a decision. Normalization Test has been performed for filtering the data. The Research Questions, here also mentioned as, 5 observed or measured variables were analysed against the 3 nos. of Hypotheses factors. Confirmatory factor analysis of the responses obtained from interviewing the officials were analysed based upon the 3 Hypotheses factors and a correlation among those hypotheses have been further analyzed to conclude that which are the Hypotheses are having a positive effect.

#	Research Question	#	Hypothesis
X-1	Do computerization and E-governance promotes service deliveries as smarter, faster and more empowered methods?	H-1	A major portion of the employees in the concerned Govt. sectors has a significant role in being sufficiently aware about technology
X-2	What are the influencing effects of the success/failure of the implemented E-governance?	H-2	E-governance needs have significant role for being not equally high in all of these Govt. sectors
X-3	Do E-governance projects are tasting success in all the Govt. departments/sectors?		
X-4	Do successful service deliveries by E-governance influencing users to participate in further Training and Development for future innovation?	H-3	Challenges and impediments of E-governance has a significant role in being short-term and can be overcome in the long-term
X-5	How the acceptability/popularity quotient of particular program helps in the trust building and influence mental satisfaction in other departments' workers in similar environment?		

Our objective is to see whether the model specified above is true in connection with the data collected.

In confirmatory factor analysis it is assumed that the underlying factors are correlated to each other. It measures how similar (associated) two hypotheses are across the variables. Factor Correlation must be <0.85 and range should be within 0 and 1. Out of the responses obtained from the analysis of the research question, Skewness and Kurtosis values are found to be closer to 0 [Skewness from (-)0.24 to (+)0.49 i.e. in limit of thumb rule of -0.8 |S| +0.8 and Kurtosis from (-)0.92 to (+)0.21 i.e. within limit of thumb rule of -3.0 |K| +3.0].

When all the above criteria meet the acceptable range, we go for parameters estimates.

©IJRASET: All Rights are Reserved

IV. RESULTS OBTAINED

All the above measures are more all less within the acceptable range.

	X-2	X-2	X-3	X-4	X-5
X-1	1	0.575	0.261	0.487	0.409
X-2	0.575	1	0.516	0.658	-0.012
X-3	0.261	0.516	1	0.254	0.000
X-4	0.487	0.658	0.254	1	0.341
X-5	0.409	-0.012	0.000	0.341	1

Pearson 'r' correlation statistical measure has been used to measure the degree of relationship between the linearly related two variables with each other. The Pearson value of r is obtained therefore in the above table suggesting that there is either positive values (as one variable increases, the other also increases) or negative values (when one increases, the other variable decreases) of the linear relationship between two research questions at any point of time.

Also, from the statistical analytical result we saw that the research question "Do computerization and E-governance promotes service deliveries as smarter, faster and more empowered methods?" has high association with the Hypothesis "A major portion of the employees in the concerned Govt. sectors has a significant role in being sufficiently aware about technology" the correlation coefficient being 1.0. In case of the pair of research questions "What are the influencing effects of the success/failure of the implemented E-governance" and "Do E-governance projects are tasting success in all the Govt. departments/sectors?" the first question has high association with the Hypothesis "E-governance needs have significant role for being not equally high in all of these Govt. sectors" its correlation coefficients being 0.966 but the second research question have low association with the Hypothesis where correlation coefficient is 0.512). Then, the other pair of research questions "Do successful service deliveries by E-governance influencing users to participate in further Training and Development for future innovation" and "How the acceptability/popularity quotient of particular program helps in the trust building and influence mental satisfaction in other departments' workers in similar environment" have high association with the Hypothesis "Challenges and impediments of E-governance has a significant role in being short-term and can be overcome in the long-term" (correlation coefficients being 0.804 and 0.631). Hence, based on this we can say that the question "Do E-governance projects are tasting success in all the Govt. departments/sectors?" have lower effects than the other questions that are becoming challenges in implementing E-governance in Govt. sectors.

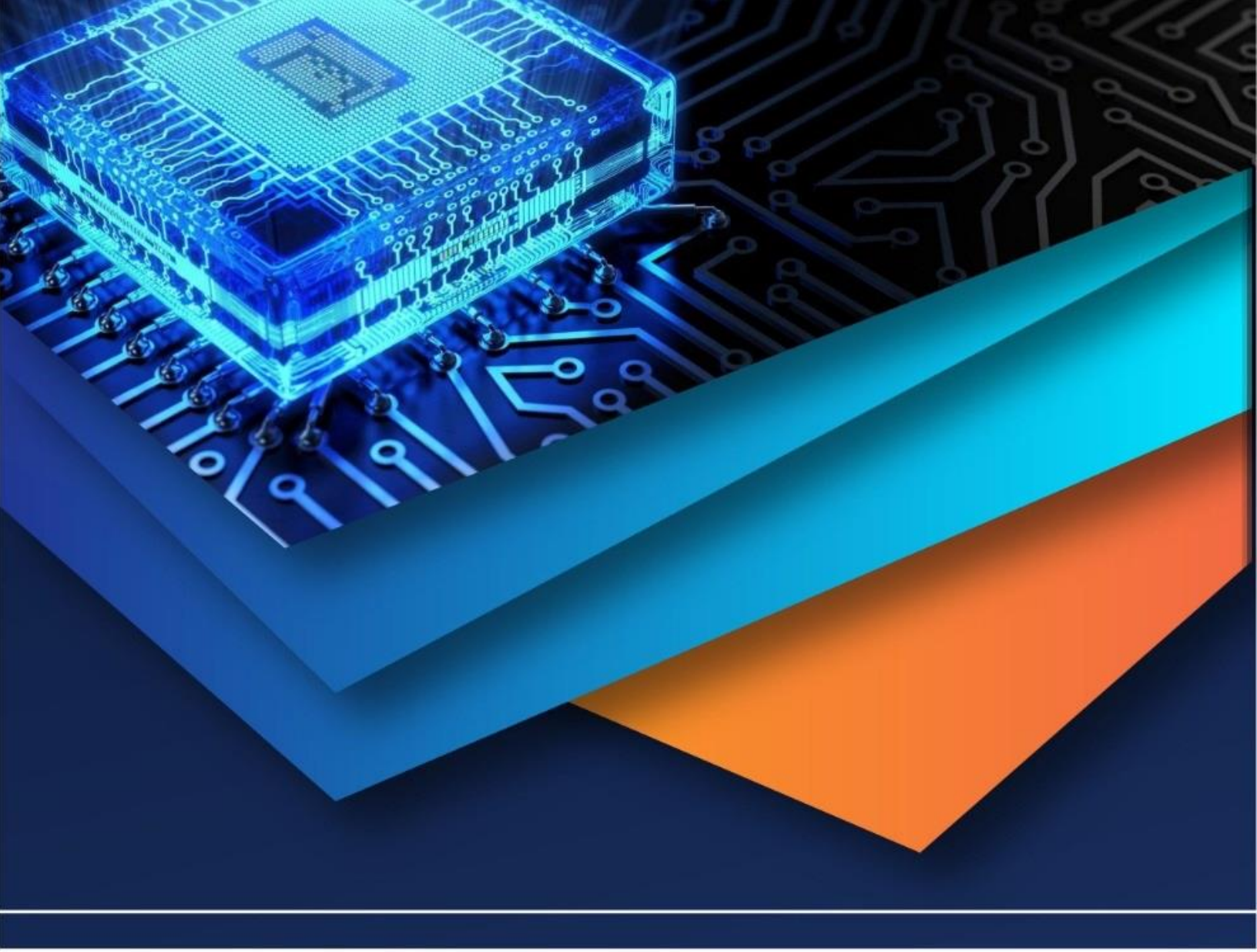
	H-1	H-2	H-3
H-1	--	0.446	0.065
H-2		--	0.063
H-3			--

Looking into the correlations among the factors we come to the conclusion that Hypothesis 1 have a strong positive correlation (0.446) with Hypothesis 2, whereas the relation with Hypothesis 3 is low (0.065). Again, the relation between Hypothesis 2 and Hypothesis 3 is observed to be a low association (0.063). As for Hypothesis 1 and 2, it can be stated that A major portion of the employees in the concerned Govt. sectors are sufficiently aware about technology and also E-governance needs are not equally high in all of these Govt. sectors. As for Hypothesis 1 and 3 and Hypothesis 2 and 3, it has to be stated that challenges and impediments of E-governance are not always short-term and cannot be always overcome in the long-term. The overall measurement indices such as chi square value (83.595), SRMR (0.05), RMSEA (0.044), CFI (0.946) etc are within the acceptable range. So, as a conclusion we can say that the data that is collected through the questionnaire gives enough evidence to support the hypotheses that are guessed from prior research studies.

V. CONCLUSION

E-governance has been widely and strategically accepted in the Urban Development department due to wide awareness among major portions of the government employees but there are uneven demands of E-governance in different departments and not all the challenges can always be overcome by the government. There is a clear requirement of establishing a system on Training and Development for future innovation and successful E-governance in the Urban Development Department.

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)