

VISUALIZATION OF VARIOUS CHALLENGES, RISK, BARRIERS IN IMPLEMENTATION OF E-GOVERNANCE IN NEPAL

Sant Kumar Verma¹, Dr. Ajay Kumar Bharti²

¹Ph.D Scholar, Faculty of Computer Science & Technology, Maharishi University of Information Technology, Lucknow

²Professor & Dean, Faculty of Computer Science & Technology, Maharishi University of Information Technology, Lucknow

Sant Kumar Verma¹, Dr. Ajay Kumar Bharti², Visualization Of Various Challenges, Risk, Barriers In Implementation Of E-Governance In Nepal– Palarch's Journal of Archaeology of Egypt/Egyptology 17(9) (2020), ISSN 1567-214X.

Keyword: Information Communication Technology (ICT), Nepal, E-Governance, Python, Online Service index (OSI).

Abstract:

E-governance is an important aspect of developing countries. After adoption of federal structure in Nepal various initiatives has been taken by government of Nepal to implement e-governance in country, but still Nepal is taking behind in implementation of e-governance. Current status of rank on implementation of e-governance and other issues shows that Nepal is far behind from other countries. Also in comparison to others SAARC nation also Nepal is lacking behind. Current rank 2020, in e-governance development index show that Nepal is 132 rank. This paper shows the visualization of various challenges, risk and barriers in implementation of e-governance in Nepal.

INTRODUCTION

E-governance is more than just a government website on the Internet. But what is it exactly? What are the benefits of e-governance? What can governments do to make it work? Solutions to development issues often require changes to government processes, e.g. by decentralization. Objectives are generally to improve efficiency and effectiveness and to save costs. The driving force can also be public demand for online services and information that increase democratic participation, accountability, transparency, and the quality and speed of services in Nepal. Nepal face Monarchy for a really long time, this drives the country backward in implementation of e-governance [1] [11-15].

The implementation and use of Information Communication Technology (ICT) solutions can support governance reforms. E-governance will become more and more present around the world in the next few years. Over the coming years also developing countries and their citizens can also benefit from e-governance [2] [16-19]. This report explains what is meant by e-governance. It starts with an objective of the research, and then presents a general e-governance model in Nepal.

Finally, a description is given of what steps have to be taken to show the factors that are responsible for not having proper e-governance in Nepal and how we can resolve these barriers in Nepal. The strategic objective of e-governance is to support and simplify governance for all parties - government, citizens and businesses. The use of ICTs can connect all three parties and support processes and activities [3] [20-25]. In other words, in e-governance uses electronic means to support and stimulate good governance. Therefore the objectives of e-governance are similar to the objectives of good governance. Good governance can be seen as an exercise of economic, political, and administrative authority to better manage affairs of a country at all levels, national and local. It is useful here to present objectives for e-democracy and e-government in Nepal. The two main objectives of e-governance are:

1. To provide citizens access to information and knowledge about the political process, about services and about choices available

2. To make possible the transition from passive information access to active citizen participation by:

- Informing the citizen
- Representing the citizen
- Encouraging the citizen to vote
- Consulting the citizen Involving the citizen

The United Nations E-Government Survey 2020: For Gearing E-Government to Support Transformation towards sustainable and resilient societies the United Nations E-Government Survey 2020 was launched on July 19 2020.

DATA ANALYSIS

The analysis is based on the data taken from various peoples of administrative department, Educational department, Agricultural department, Medical department and other government bodies of Nepal.

We visualize the dataset with the help of libraries in python such as Pandas [4], Matplotlib with Pyplot [5], Seaborn [6], Numpy [7]. These libraries help to visualise the data in different form plots and graphs to understand the data better. We apply regression on the data and resolve the complication and not a number (nan) data from the dataset.

There are several analyses on the basis of Profession, Gender, Age, Education etc which shows the education is not up to the mark, people with more age are not willing to adapt the changes.

In Figure 1 the heat map [8] analysis shows the correlation in better and easier manner.

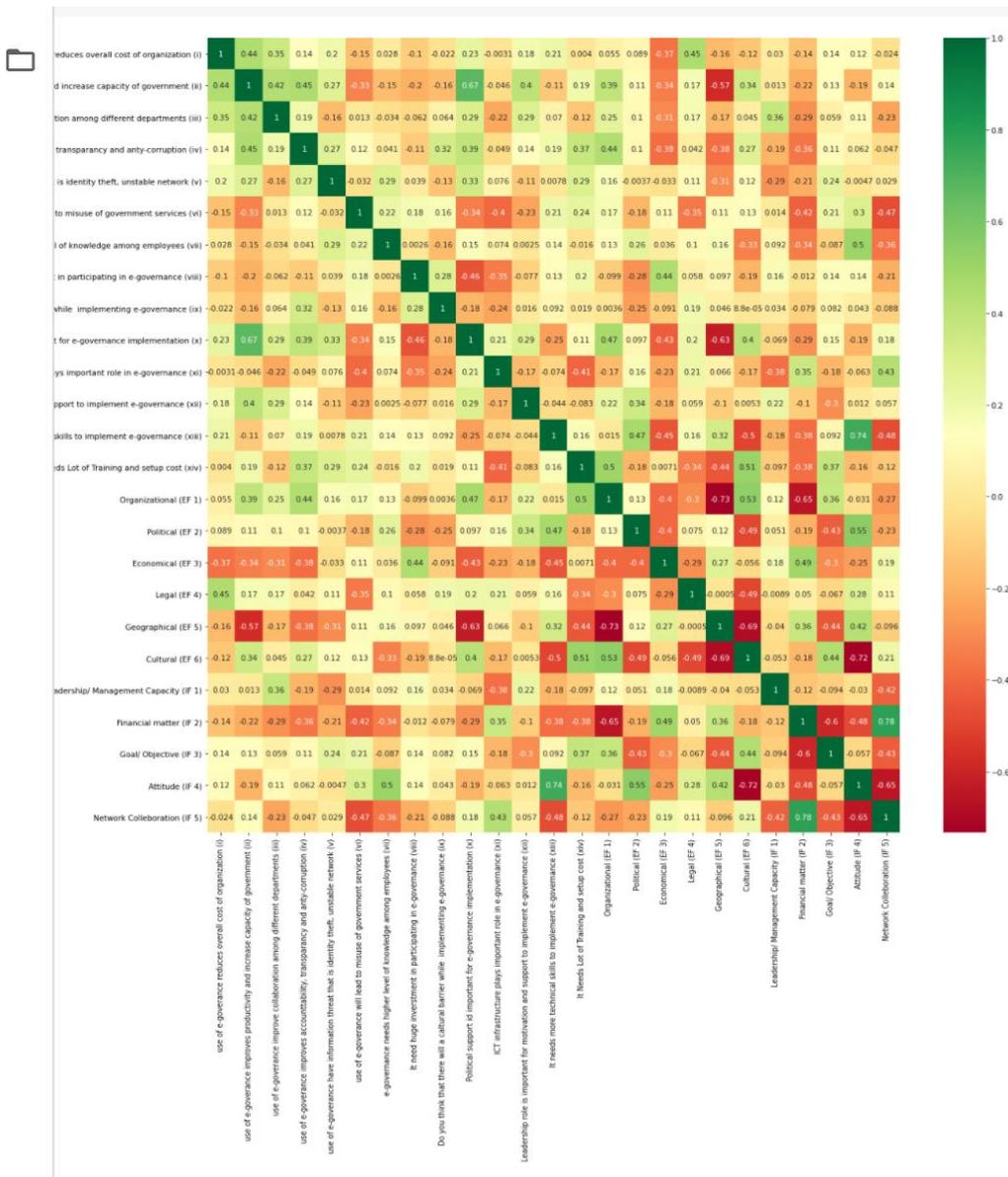


Figure 1: Heat Map Analysis

In Figure 2 there are various internal factors which are responsible for lacking in e-governance in Nepal like Leadership capacity, Financial Matter, Objective, altitude, Network collaboration. It concludes that according to the citizens of Nepal, the main internal factor responsible for lacking in e-governance in Nepal is “Leadership Capacity” [9].

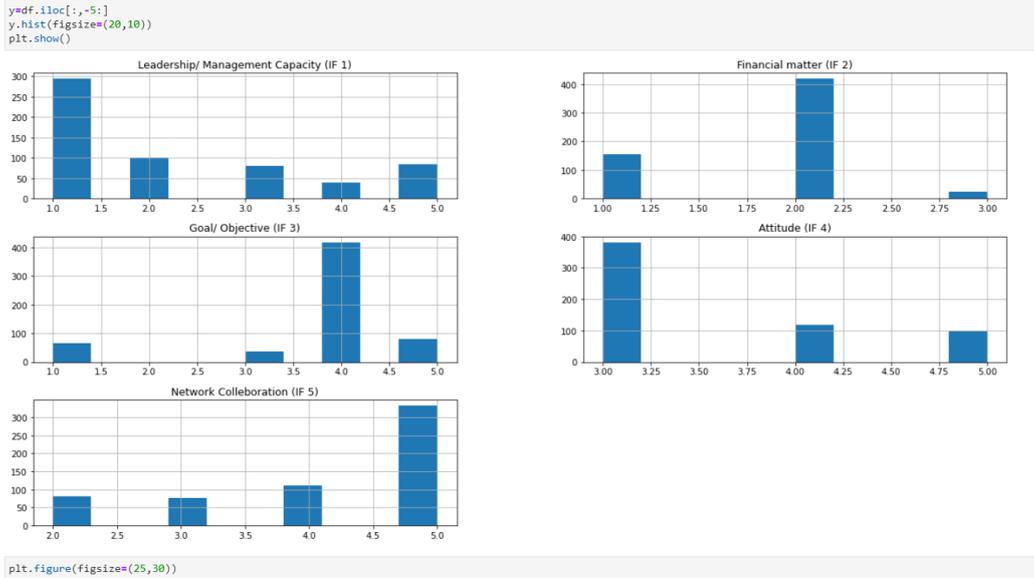


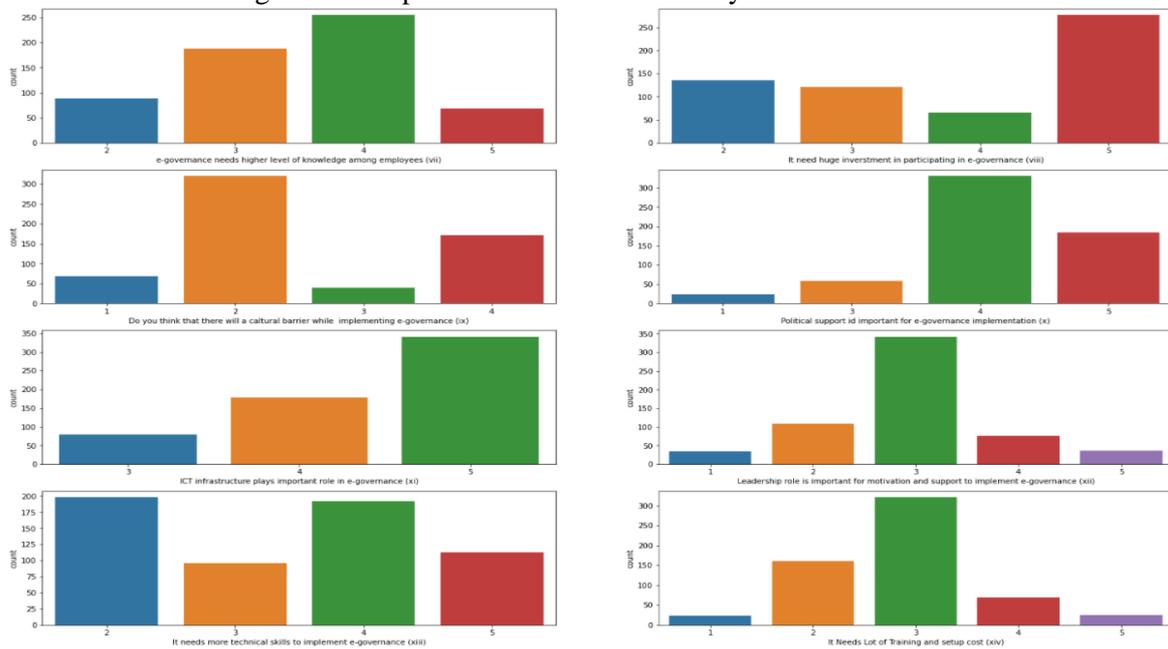
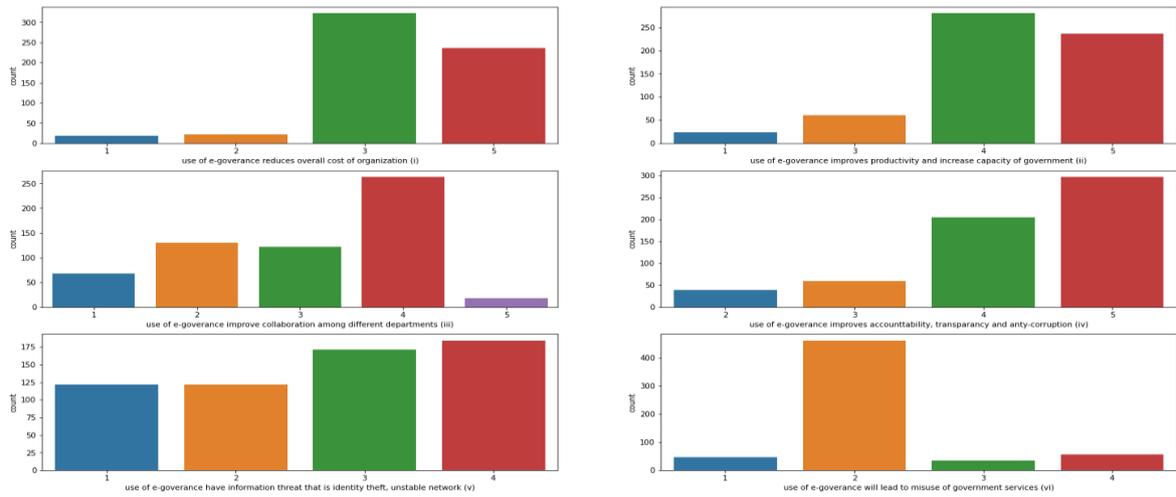
Figure 2: Data Analysis for Leadership Capacity

In Figure 3 there are various external factors which are responsible for lacking in e-governance in Nepal like Leadership capacity, Financial Matter, Objective, altitude, Network collaboration. It concludes that according to the citizens of Nepal, the main external factor responsible for lacking in e-governance in Nepal is “Political Factor”.



Figure 3: Data Analysis for Political Factor

There are various points on which the citizen of Nepal agree and disagree on the points responsible for being far back in e-governance in Nepal as compared all over the world [10].



From Figure 4 and Figure 5 concluded on the basis of responses of citizen of Nepal.

Strongly Disagree: Use of e-governance have information threat that is identity theft, unstable network.

Disagree: use of e-governance will lead to misuse of government services, do you think that there will a cultural barrier while implementing e-governance.

Neither Agree nor Disagree: use of e-governance reduces overall cost of organization, Leadership role is important for motivation and support to implement e-governance, It Needs Lot of Training and setup cost.

Agree: use of e-governance improves productivity and increase capacity of government, use of e-governance improve collaboration among different departments, e-governance needs higher level of knowledge among employees, Political support id important for e-governance implementation

Strongly Agree: use of e-governance improves accountability, transparency and anti-corruption, it needs huge investment in participating in e-governance, and ICT infrastructure plays important role in e-governance

CONCLUSION

The above study shows that the implementation of e-governance has to face many challenges and need a lot of up gradation. Nepal has massive barriers like geographical issues, social, political, low leadership capacity. To improve the e-governance index, Nepal need to improve e-participation index, Online Service index (OSI) and Telecommunication infrastructure. The actual root reason why e-governance development is slow with the progress in Nepal is Political factor, educational factor and its altitude. In case to improve the situation government have to work on small government bodies by making a durable plan so that the infrastructure expands in various areas of Nepal.

References

- [1] “What is Good Governance?” United Nations Economic and Social Commission for Asia and the Pacific.
- [2] <https://publicadministration.un.org/egovkb/en-us/Data-Center>
- [3] “Nepal profile - Timeline - BBC News,” 2017. [Online]. Available: <https://www.bbc.com/news/world-south-asia-12499391>.
- [4] <https://pandas.pydata.org/>
- [5] “matplotlib.pyplot.scatter”
https://matplotlib.org/3.3.3/api/_as_gen/matplotlib.pyplot.scatter.html
- [6] <https://seaborn.pydata.org/>
- [7] <https://numpy.org/doc/stable/user/quickstart.html>
- [8] <https://seaborn.pydata.org/generated/seaborn.heatmap.html>
- [9] <https://medium.com/data-science-in-your-pocket/data-visualization-for-data-science-beginners-84bacdb8d72e>.
- [10] United Nation, “UN E-Government Survey 2020,” 2020.
- [11] Sheng Yap Kioe, “What is Good Governance?” United Nations Economic and Social Commission for Asia and the Pacific.
- [12] United Nation, “UN E-Government Survey 2018,” 2018. [Accessed: 26-Feb2019].
- [13] S. C. J. Palvia and S. S. Sharma, “E-Government and e-governance: definitions/domain framework and status around the world,” *Found. eGovernment*, pp. 1–12, 2007.
- [14] Y. N. Chen, H. M. Chen, W. Huang, and R. K. H. Ching, “E-Government Strategies in Developed and Developing Countries: An Implementation Framework and Case Study,” *J. Glob. Inf. Manag.*, vol. 14, no. 1, pp. 23–46, 2006.
- [15] G. P. Adhikari, “Evaluation of e-Governance Projects of Nepal,” *Proc. 6th Int. Conf. Theory Pract. Electron. Gov.*, pp. 472–473, 2012.
- [16] G. P. Adhikari, “Key issues in implementing e-governance in Nepal,” in *Proceedings of the 1st international conference on Theory and practice of electronic governance - ICEGOV '07*, 2007, p. 243.
- [17] P. Kharel and S. Shakya, “e-Government Implementation in Nepal : A Challenges,” *Int. J. Adv. Res. Comput. Sci. Softw. Eng.*, vol. 2, no. 1, p. Online, 2012.
- [18] D. B. Dharmi and I. Futó, “Implementation Challenges of e-Governance in Nepal and Possible Steps,” in *8th International Conference on Applied Informatics , EGR*, Hungary, 2010, vol. 1, pp. 433–445.
- [19] S. Shakya, “the Challenges of E-Governance Implementation in Nepal,” Tallinn University of Technology, 2017.
- [20] “Nepal profile - Timeline - BBC News,” 2017. [Online]. Available: <https://www.bbc.com/news/world-south-asia-12499391> [Accessed: 27-Feb2019].
- [21] GoN, “The Constitution of Nepal, 2072,” vol. 2015, no. September, pp. 1–226, 2015. Solid State Technology Volume: 63 Issue: 6 Publication Year: 2020 Archives Available @ www.solidstatetechnology.us 8866

- [22] N. Silwal, T. C. Bruneau, and A. Chatterjee, "FEDERALISM IN NEPAL: DIVERGENT PERCEPTION AND CONVERGENT REQUIREMENT FOR DEMOCRATIC CONSOLIDATION," 2013.
- [23] M. A. Nour, A. A. AbdelRahman, and A. Fadlalla, "A context-based integrative framework for e-government initiatives," *Gov. Inf. Q.*, vol. 25, no. 3, pp. 448–461, Jul. 2008.
- [24] Government of Nepal and KIPA, "E-Governance Master Plan Consulting Report," 2006.
- [25] Government of Nepal, "E-Governance Master Plan (eGMP)," 2015.