



E-Governance in the global context: Models and UNDP framework

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Abstract

E-Governance is a revolutionary transformation of the entire governance structure from manual to digital-based technology to attain SMART governance in the administration process. The transformation from traditional methods of delivery of governmental services to the new way of technology-enabled services needs preparedness, readiness level of adoption, and implementation of technology both at the administration level and at the grassroots level. Here, step-by-step adoption, awareness, training, and digital literacy among the staff and citizens are very important for the success of e-governance in an economy. This paper discusses the E-governance models and the UNDP framework in the global scenario in the context of E-governance.

Key words: E-governance, global scenario, UNDP framework

Introduction

E-governance models depict the path, direction, guidance, and target to be formulated by a nation for the successful implementation of e-governance initiatives, with a special focus on re-engineering the entire governmental organizational structure in an economy. However, to incorporate ICT in every corner of the governmental mechanism, the major thrust areas identified for the initial level of preparedness are what type of suitable policies should be adopted, incorporating sensible programs, a step-by-step implementation process, the level of incorporation, basic physical and digital infrastructural facilities needed, and creating awareness among different stakeholders are the key indicators where an economy targets to attain inclusiveness goals. Based on this, many countries have adopted various strategies, set goals, models, and successfully implemented information and communication technologies to enhance the efficiency, effectiveness, responsiveness, accountability, participation, transparency, and inclusiveness in governmental service delivery.

Objectives

- To study E-governance models, readiness, and usage level at the international scenario.
- To analyze the evaluation framework of E-governance in the global scenario

E-governance models -Global view

The E-governance models are categorized based on different stakeholders involved; information flows are discussed as follows

1. E-governance models based on the stakeholders involved

The E-Governance models are developed based on the different stakeholders involved in building relationships, benefits, faster communication, and availing the facilities, depending on the objectives, content, and services to the different stakeholders. In this context, the government plays a predominant role in extending governmental services to different kinds of people for different services at their doorsteps, intending towards maximum benefits of governmental services by covering the maximum number of people, where inclusiveness principles are adopted to reach the grassroots level. The public services available to different stakeholders based on services are categorized as follows

- G2C (Government to citizen)
- G2G- (Government-to-Government)
- G2E-(Government-to-employee)
- G2B (Government-to-business)
- G2F (Government-to-farmers)
- B2F (Business-to-farmers)

2. E-governance models based on Information flow

An American professor, Prof. Dr. Arie Halachmi, has developed the E-governance models based on information flow with the publication of his famous research work known as “E-Government Theory and Practice: The Evidence from Tennessee (USA),” which strongly recommended how dissemination of information happens in an economy. Based on the workflow of disseminating information, the models can be classified as follows: 1. The Broadcasting Model, 2. The Critical Flow Model 3. The Comparative Analysis Model 4. The E-Advocacy/Mobilization and Lobbying Model 5. The Interactive-Service Model

The overall achievement in the adoption of digital in the public management system, beneficiaries benefitted, continuation of the project, essence of the project, and their level of services are the major indicators depicts level of countries' e-governance development. At present, UNDP EDGI consists of three components as follows

1. Online service index (OSI)
2. Telecommunication infrastructure index (TII)
3. Human capital index (HCI)

These components were evaluated based on the questionnaires prepared by the expert group, focusing on the areas of availability of digital infrastructure, internet usage, proactive government policy towards digitalization of the government mechanism, e-project implementation and continuation, use by different stakeholders, and level of awareness and availability of E-services.

1. Online service index (OSI)- It includes: a. OSI Institutional framework, b. Content provision; c. Service provision (SP) d. Technology (TEC) e.E-participation

2. Telecommunication infrastructure index (TII)

The telecommunication infrastructure index is calculated based on the information gathered from the International Telecommunication Union from all member countries. It is a clear indication of digital infrastructure availability and accessibility in a country.

3. Human capital index (HCI)

The human capital index is calculated using data from the United Nations Educational, Scientific and Cultural Organization and recently includes the digital literacy index to assess the digital divide in an economy.

UNDP E-Governance Development Index- Top 10 countries of the world

The UNDP constructed an E-Governance Development Index (2024) based on prime indicators to assess the level of E-government development, readiness, status, and successful initiatives implemented in the countries. Based on the survey reports, the UNDP has given the ranks scored by 196 member countries and the top ten EDGI rank holders of the world; those who come under the high-value countries with their EGDI value are mentioned below.

Table 3. : E-Governance Development Index- 2024 Top ten countries of the world

Country Name	Region	Rating class	OSI	HCI	TII	EGDI 2024	EGDI 2022
Denmark	Europe	VH	0.9992	0.9584	0.9966	0.9847	0.9717
Estonia	Europe	VH	0.9954	0.9497	0.9732	0.9727	0.9393
Singapore	Asia	VH	0.9831	0.9362	0.9881	0.9691	0.9133
Republic of Korea	Asia	VH	1.000	0.9120	0.9917	0.9679	0.9529
Iceland	Europe	VH	0.9076	0.9953	0.9983	0.9671	0.9410
Saudi arabia	Asia	VH	0.9899	0.9067	0.9841	0.9602	0.8539
UK&northern Iceland	Eurpoe	VH	0.9535	0.9450	0.9747	0.9577	0.9138
Australia	Ocenia	VH	0.9222	1.000	0.9509	0.9577	0.9405
Finland	Europe	VH	0.9097	0.9836	0.9791	0.9575	0.9533
Netherlands	Europe	VH	0.9212	0.9688	0.9715	0.9538	0.9384

Source: United Nations E-government Survey 2024, VH-Very high class, OSI-Online service index, HCI-Human capital index, TII-Telecommunication infrastructure index

The above table depicts the United Nations E-governance Development Index of 2024 E-governance development status of the top ten countries in the world. The e-governance development index reflects the effective implementation of e-governance projects, inclusion, participatory, responsiveness indicators are achieved. The e-Participation rate is also very high in this nation, where every sector is digitalized, online

services are available, accessible to everyone, and the digital infrastructure and human capital index. Here, in the 2024 index, the top 1 rank was achieved by Denmark with 0.9847 value compared to 2022, its value was 0.9717, shows the progress in the achievement of digital government in the global scenario. Estonia secured 2nd rank with 0.9727 and has achieved the target with effective implementation of E-projects and digital infrastructure in the economy. The 4th place was taken by the Republic of Korea, an Asian country that, with the adoption of national-level e-governance plans able to achieve the top ranks in the UNDP EGDI, but in the 2002 EGDI index it was in 3rd place with 0.9529 value. Australia, Finland, Netherland also achieved 8th, 9th, and 10th positions among the top ten countries listed above due to the efforts of the government and active participation of the population. From the national level to regional and village-level efforts are taken by the government for digital and physical infrastructure, maintenance and continuation, and upgradation of the e-governance projects; strategic plans are adopted to fulfil the target to achieve 100% e-government in their nations.

Conclusion

The information and communication technology applied at the governance level has brought drastic changes in the entire governance structure. E-governance success depends on readiness level, government initiatives, policy measures, and the adoption of new technology by the citizens of respective countries. In this respect, all the countries of the world have seriously taken appropriate policy measures for the successful implementation of ICT at the governance level.

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