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# Identifying Factors for Effective E- Governance Framework in Sudurpashchim Province, of Nepal

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#### **ABSTRACT**

E-governance is currently a critical instrument for improving the efficacy of public administration and the engagement of citizens on a global scale. Sudurpashchim Province, Nepal, to identify critical factors contributing to an effective e-governance framework. The dimensions that are critical for successful implementation, with a particular emphasis on capacity building and training, technological infrastructure, service delivery, transparency and accountability, and citizen engagement. A mixed-methods approach is employed, combining quantitative surveys using a structured questionnaire with qualitative insights from key informant interviews. Data analysis includes descriptive statistics and thematic analysis to provide a comprehensive understanding of the factors influencing e-governance effectiveness in the province. The findings are expected to inform policy makers, administrators, and stakeholders about strategic areas for investment and improvement in e-governance infrastructure and practices in Sudurpashchim Province, Nepal.

**Keywords:** E-governance, Sudurpashchim Province, Nepal, citizen engagement, transparency, accountability, service delivery.

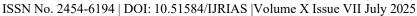
#### INTRODUCTION

E-governance has emerged as a critical mechanism for enhancing transparency, efficiency, and accountability in government operations. In the context of Sudurpashchim Province, Nepal [1], the adoption of e-governance is increasingly recognized as a pivotal step towards modernizing administrative functions and improving public service delivery. This region, characterized by its geographical diversity and socio-economic challenges, presents unique opportunities and obstacles in the implementation of e-governance initiatives [2]. The current focus is on identifying the key factors that contribute to an effective e-governance framework within Sudurpashchim Province. These factors encompass technological infrastructure, policy and regulatory frameworks, human resource capacity, stakeholder engagement, and the integration of digital services [3]. By understanding these elements, policymakers and practitioners can develop strategies that address the specific needs and conditions of the province.

The need for an effective e-governance framework in Sudurpashchim Province is driven by several imperatives. Firstly, it aims to bridge the digital divide and ensure equitable access to government services for all citizens, particularly those in remote and underserved areas [4]. Secondly, it seeks to enhance the efficiency and responsiveness of government operations, thereby fostering greater trust and confidence in public institutions. Lastly, it aspires to promote sustainable development by leveraging technology to improve governance and service delivery. The various dimensions of e-governance and identify the critical success factors that can lead to its effective implementation in Sudurpashchim Province. By doing so, we aim to contribute to the broader discourse on e-governance and provide actionable insights that can guide future initiatives in the region.

#### E-Governance Strategies in Sudurpashchim Province, Nepal

E-governance in Nepal, particularly in the Sudurpashchim Province, faces challenges such as a lack of citizen involvement, traditional governance systems, and insufficient ICT infrastructure [5] [6]. To establish an effective





e-governance framework in the region, it is crucial to focus on factors like digital sustainability, citizen-centric design, and the utilization of ICTs to enhance service delivery mechanisms [7]. The government's efforts to offer citizen services in a more efficient manner, such as through the use of citizen apps, highlight the ongoing initiatives to improve e-governance in Nepal. By addressing issues like the digital divide, lack of awareness, and strategic planning for IT human resources, Sudurpashchim Province can move towards a more citizen-centric approach in e-governance design and implementation, aligning with the global trend of utilizing e-governance to enhance service delivery and governance systems [8].

#### E-governance in developing regions

E-governance plays a crucial role in developing regions like Sudurpashchim Province, Nepal, by enhancing service delivery, reducing bureaucracy, eliminating corruption, and improving transparency accountability [9] [10]. Factors for an effective e-governance framework in such regions include utilizing IT and web-based technologies, ensuring efficient website design, promoting citizen-centric administration, and leveraging e-governance in the financial sector to combat corruption and promote economic prosperity [11] [12]. Additionally, assessing e-governance success in developing nations requires considering factors like the Online Availability and Performance Index, Telecommunications Index, Human Capital Index, E-governance-related Infrastructure Index, and E-governance Performance Index, as the UN's EGDI may not be suitable for regional assessments in developing countries like Nepal [13]. By addressing these factors, Sudurpashchim Province can establish a robust e-governance framework to drive socio-economic development and improve governance practices.

#### LITERATURE REVIEW

#### Discuss existing frameworks for e-governance success.

Kuzioret al. (2023) [14] conducted a study on smart cities, a complex concept that was analyzed from a variety of perspectives. E-governance was recognized as a critical facilitator for the integration of all components of a smart city. The article's objective was to examine the primary enablers of e-governance, with an emphasis on economic, social, political, information, and technological indicators. The study encompassed 68 smart cities that were chosen based on their diverse economic, social, and political developments, as well as their regional affiliations. The authors employed cluster analysis to organize smart cities into subgroups based on e-governance indicators. They employed VAR/VEC modeling to investigate the primary factors that influence the development of e-government in smart cities, and they constructed an integral indicator using a linear mathematical model and the Fishburn formula. The Human Development Index had the most significant impact on e-governance, according to the study, while the GNI per capita indicator did not exhibit any influence across all clusters. The primary direct influence on the Smart City Governance Index for smart communities in the first cluster with the highest e-governance indicators was identified as the factor of information technologies.

Pontones-Rosa et al. (2023) [15] discussed the extent of e-government implementation in rural municipalities of depopulated Spain and to contemplate its potential impact on the intention of citizens to emigrate. The study concentrated on the Province of Albacete, which is renowned for its implementation of digital services. It assessed the development of the e-government supply by constructing municipal indexes through website content analysis. The research also evaluated the demand and actual use of e-government by rural residents by employing regression analysis, which was based on survey data collected by the authors. The findings revealed a digital divide by municipal size, as evidenced by the deficient e-information and e-participation in minor municipalities. On the demand side, the results underscored the necessity of fostering a more widespread adoption of e-government and improving digital inclusion across all demographic groups.

Terrance et al. (2023) [16] evaluated South African municipalities' e-government readiness. examined how e-readiness affects e-government implementation, concentrating on e-participation platforms and municipal e-services. The researcher contextualized the problem statement with e-government deployment using an e-readiness theory. The qualitative investigation relied mainly on secondary data. Doctrinal examination was used to purify the data and avoid inaccuracies and irrelevant data display. Four municipalities were examined for e-government service commitment and e-readiness. To support assertions, descriptive data analysis

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contrasted secondary data from scholarly journals, books, reliable websites, municipal digital plans, and peer-reviewed databases. A shortage of ICT expertise led to significant e-government implementation failure rates. Insufficient budgets for ICT infrastructure maintenance also slowed e-government progress in the selected towns. E-government transformation plans and policies lacked direction in delivering ICT infrastructure, the study found. The report advised adopting e-government initiatives and using ICT tactics to increase e-participation and deliver better e-services.

Rahman et al. (2021) [17] aimed to undertake a thorough examination of the various theories that have been developed to explain the perception of e-governance, with a particular emphasis on the penetration of e-government systems at the grassroots. The research explicitly concentrated on the implementation of e-government at the grassroots level, which penetrated the lowest tier of the governance system in order to enhance knowledge and empower communities. The study suggested a prospective research agenda and proposed a framework for future e-governance systems at the local government level. Islam et al. (2021) conducted an analysis of the current state of e-governance in Bangladesh and identified impediments to the improvement of public service delivery and citizen engagement. The investigation determined that corruption was diminished in Bangladesh as a result of e-governance initiatives, including procurement and online service delivery. Nevertheless, there were still significant challenges, such as a scarcity of infrastructure, residents with insufficient knowledge and expertise, and public authorities with insufficient resources. The research also identified opportunities for e-governance to increase citizen engagement, improve transparency and accountability, and broaden access to public services.

Mensah et al. (2020) [18] proposed and validated extension of the unified model of electronic government adoption (UMEGA). In stark contrast to expectations, the findings indicated that the attitude toward the use of e-government services was not predicted by performance expectancy, effort expectancy, or social influence. Behavioral intention to use and effort expectancy of e-government services were significantly determined by facilitating conditions. The intention to use and recommend e-government services was positively predicted by a person's trust in the government and perceived service quality.

Table 1. Comparative table of following data

| Author &<br>Year                   | Result   | Finding   |  |  |  |  |
|------------------------------------|--|---|--|--|--|--|
| Kuzior et<br>al. (2023)            | Analyzed smart cities from various perspectives and recognized e-governance as a critical facilitator.                             | Found that the Human Development Index had the most significant impact on e-governance, while GNI per capita did not exhibit any influence across all clusters. Information technologies had a primary direct influence on the Smart City Governance Index for the first cluster. |  |  |  |  |
| Pontones-<br>Rosa et al.<br>(2023) | Assessed e-government implementation in rural municipalities in Spain and its potential impact on citizens' emigration intentions. | Revealed a digital divide by municipal size, with deficient e-<br>information and e-participation in minor municipalities.<br>Emphasized the necessity of fostering widespread e-<br>government adoption and improving digital inclusion.   |  |  |  |  |
| Terrance et al. (2023)             | Evaluated South African municipalities' e-government readiness.  | Found significant e-government implementation failure rates due to a shortage of ICT expertise and insufficient budgets for ICT infrastructure. Suggested adopting e-government initiatives and ICT tactics to increase e-participation and improve e-services.                   |  |  |  |  |
| Rahman et al. (2021)               | Examined theories explaining e-<br>governance perception and   | Proposed a framework for future e-governance systems at the local government level to enhance knowledge and empower communities.  |  |  |  |  |



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|                         | focused on grassroots implementation.   |  |  |  |  |  |
|-------------------------|---|--|--|--|--|--|
| Islam et al. (2021)     | Analyzed e-governance in Bangladesh and identified impediments to public service delivery and citizen engagement. | d faced challenges such as insufficient infrastructure knowledge among residents, and lack of resources a  |  |  |  |  |
| Mensah et<br>al. (2020) | Proposed and validated the UMEGA model for e-government adoption.   | Found that attitude towards e-government services was not predicted by performance expectancy, effort expectancy, or social influence. Instead, behavioral intention and effort expectancy were significantly determined by facilitating conditions, trust in government, and perceived service quality. |  |  |  |  |

#### **Factors for effective E- governance**

Shah et.al (2023) [19] discussed the confidence of Nepali public secondary school instructors in their ability to complete professional responsibilities was a challenging issue. Research has been conducted to ascertain the factors that contributed to the self-efficacy of Nepali educators. The variables were identified using the NTSE instrument, developed by e-Delphi. A total of 390 out of 3427 public school instructors in Kathmandu, Lalitpur, and Bhaktapur were assessed. Cluster sampling was used to select a local government body from each district. A principal component matrix with varimax rotation was applied for exploratory factor analysis (EFA). The EFA extraction was validated through confirmatory factor analysis. Teacher self-efficacy in Nepali public schools was found to be influenced by four variables, including instructional preparation and student engagement, according to the study. The research elucidated instructors' self-efficacy, a fundamental psychological concept in professional development, which impacts students' academic performance.

Khatiwada et.al (2023) [20] determined the Nepal government implemented the "Prime Minister Employment Programmed" (PMEP) to combat destitution and increase the workforce by generating additional employment opportunities. The capacity of PMEP to generate rural employment opportunities, and the level of engagement of women and local administrations were investigated. The impacts of PMEP on the rural economy and agricultural initiatives of Nepal were also studied. A review of secondary data from PMEP resources, policies, legal documents, and literature was conducted in conjunction with informal discussions and interviews with government actors. Sources of contemporary news offered descriptive, graphical, and textual perspectives. The disparity between the number of registered participants and the number of work offers indicated that it had been challenging to attain employment. Municipal governments were inadequately engaged in the resources, and infrastructure development was prioritized over agricultural assistance. PMEP guarantees Nepal's citizens' long-term social and economic rights by offering temporary employment and social security in the country's restricted labor market, despite its many obstacles.

Romkant et.al (2023) [21] discussed the local governments had to implement a broadband strategy and information security essentials. Developing ICT infrastructure and providing e-services to businesses made the local government a key player in regional economic development. This report found that several Nepalese localities had not used innovative technologies for service delivery. Some local levels had been assigned responsibilities to individuals without IT certifications or knowledge. The local government had not taken responsibility for the security and sensitivity of information technology-related equipment and materials used in the office, and its capacity to expand IT infrastructures and make policy and legal arrangements for managing IT had been weak. This research focused on integrated software with substantial capacity that DoIT had to develop and distribute to all local levels, providing technical knowledge and training for IT workers, and mandating each Nepalese locality to develop and implement its own IT Policy.

**Shyan et.al (2022) [22]** proposed the E-Governance delivered services to citizens online using ICT. Organizations benefited from technology. Conventional jobs required time and people. Applications for services



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had to include citizenship certificates and other evidence. Online e-government platforms allowed citizens to access services anywhere. Citizen-centric online government service request systems attracted customers. The traditional governance system, lack of awareness and motivation in political leadership, lack of citizen involvement, lack of technology adoption research, digital divide, change management issues, insufficient ICT infrastructure, lack of integration in online services, and lack of a strategic plan for IT human resources made citizen-centric e-Governance in Nepal seem unsolvable. By reviewing literature, past lessons, and the government's current circumstances, leadership could create, develop, and implement citizen-centric e-Governance.

Chandan et.al (2022) [23] discussed the Nepal, ICT was used to provide government services, although it faced similar issues as underdeveloped nations that hindered its deployment. This study identified the Basic Achievement Factors (BAFs) needed to deliver e-Government services in a G2C paradigm. To adapt nation models for Nepal, the study technique used a 5-point Likert scale questionnaire, key informant interviews, and literature content analysis. With rapid technological improvements, this method promoted digital sustainability. Implementing agencies struggled with IT literacy and poverty. Despite these obstacles, the Citizen App showed Nepalese authorities' dedication to improving citizen services. The study analyzed CSFs for E-Administration adoption in Nepal and proposed a strategy to improve e-Governance and digital transformation.

Table 2. Comparative table of following data

| Author &<br>Year          | Result   | Finding   |  |  |  |  |
|---------------------------|--|---|--|--|--|--|
| Shah et.al (2023)         | Investigated factors contributing to the self-efficacy of Nepali educators using the NTSE instrument. Assessed 390 public school instructors using cluster sampling and exploratory factor analysis validated by confirmatory factor analysis. | Teacher self-efficacy in Nepali public schools is influenced by four variables, including instructional preparation and student engagement. Self-efficacy impacts students' academic performance and is a fundamental psychological concept in professional development.  |  |  |  |  |
| Khatiwada<br>et.al (2023) | Examined the "Prime Minister Employment Programmed" (PMEP) to combat destitution and increase workforce. Reviewed secondary data and conducted interviews with government actors.  | PMEP faces challenges in attaining employment due to disparity between registered participants and work offers. Inadequate engagement of municipal governments in resources, prioritization of infrastructure development over agricultural assistance. PMEP guarantees long-term social and economic rights through temporary employment and social security.                |  |  |  |  |
| Romkant<br>et.al (2023)   | Discussed the need for local governments to implement broadband strategy and information security essentials. Found localities not utilizing innovative technologies for service delivery.   | Local governments assigned IT responsibilities to unqualified individuals. Weak capacity to expand IT infrastructure and manage IT policies. Recommended integrated software development by DoIT, technical knowledge training, and mandatory local IT policies.  |  |  |  |  |
| Shyan et.al (2022)        | Proposed the use of E-Governance to deliver online services using ICT. Reviewed literature and government circumstances for citizen-centric e-Governance.  | E-Governance faced challenges like lack of awareness, motivation in political leadership, citizen involvement, technology adoption research, digital divide, change management, insufficient ICT infrastructure, lack of service integration, and strategic IT human resources plan. Leadership needs to develop citizen-centric e-Governance by overcoming these challenges. |  |  |  |  |

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Chandan et.al (2022)

Identified Basic Achievement Factors (BAFs) for delivering e-Government services in a G2C paradigm using a 5-point Likert scale questionnaire, interviews, and content analysis.

Nepal faced issues like IT literacy and poverty in deploying ICT for government services. Despite these obstacles, the Citizen App showed commitment to improving citizen services. Proposed a strategy to improve e-Governance and digital transformation by analyzing CSFs for E-Administration adoption in Nepal.

#### RESEARCH METHODOLOGY

The effective implementation of e-governance frameworks has become pivotal in enhancing service delivery, promoting transparency, and fostering citizen engagement. This research aims to identify key factors that contribute to an effective e-governance framework in Sudurpashchim Province, Nepal. The study employs a mixed-methods approach, integrating qualitative and quantitative data to comprehensively explore factors such as technological infrastructure, web-based service delivery systems, administrative efficiency, and citizencentric practices. By examining these factors, this research seeks to provide insights into enhancing administrative processes, reducing bureaucratic inefficiencies, mitigating corruption, and ultimately improving governance outcomes in the region."

The factors influencing an effective e-governance framework in Sudurpashchim Province, Nepal, the research methodology employs a mixed-methods approach. Qualitative research is initially conducted to gather in-depth insights through interviews and focus groups with key stakeholders, including government officials, IT experts, and community representatives. This phase aims to identify critical factors such as citizen engagement, transparency, service delivery mechanisms, technological infrastructure, and capacity building needs. Following this, quantitative data is collected using a structured questionnaire survey distributed among a representative sample of residents and stakeholders. The survey utilizes a 5-point Likert scale to assess perceptions and preferences regarding various aspects of e-governance. Integrating qualitative and quantitative data provides a comprehensive understanding of the factors that influence the development and implementation of an effective e-governance framework in Sudurpashchim Province, Nepal.

#### RESULTS

The implementation of e-governance is perceived as a transformative strategy for improving the accountability, transparency, and efficacy of government operations. It is imperative to comprehend the precise factors that facilitate the successful implementation of e-governance frameworks as nations worldwide adopt digital governance. The objective of this investigation is to identify the primary factors that affect the efficacy of e-governance in the Sudurpashchim Province of Nepal. This research endeavors to offer a comprehensive comprehension of the components that are indispensable for the establishment of a resilient e-governance framework in this region by analyzing factors such as transparency and accountability, service delivery, technological infrastructure, and capacity building. The findings of this investigation will not only enrich the academic discourse on e-governance but also provide practical advice to policymakers and practitioners who are striving to improve digital governance in Sudurpashchim Province.

Table 3: Demographic profile

| Age   | Frequency | Percent |
|-------|-----------|---------|
| 18-25 | 37        | 24.7    |
| 26-35 | 37        | 24.7    |
| 36-45 | 25        | 16.7    |
| 46-55 | 21        | 14.0    |



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| 56 and above                     | 30        | 20.0    |
|----------------------------------|-----------|---------|
| Gender                           | Frequency | Percent |
| Male                             | 66        | 44.0    |
| Female                           | 84        | 56.0    |
| <b>Educational Qualification</b> | Frequency | Percent |
| Higher Secondary/Diploma         | 19        | 12.7    |
| Bachelor's Degree                | 44        | 29.3    |
| Master's Degree                  | 43        | 28.7    |
| Doctoral Degree                  | 44        | 29.3    |
| Occupation                       | Frequency | Percent |
| Government Employee              | 36        | 24.0    |
| Private Sector                   | 35        | 23.3    |
| Retired                          | 32        | 21.3    |
| Other                            | 47        | 31.3    |

The demographic data from a survey is presented in table 3, which is segmented by age, gender, educational qualification, and occupation. The distribution of respondents by age is evenly divided between the 18-25 and 26-35 age groups, with each group comprising 24.7% of the sample (37 individuals). The age group of 36-45 comprises 16.7% (25 individuals), followed by the 46-55 age group (14.0%) (21 individuals), and the 56- and older age group (20.0%) (30 individuals). Regarding gender, 44.0% of respondents are male (66 individuals), while 56.0% are female (84 individuals). Educational qualifications comprise 12.7% of the sample, with 19 individuals possessing a Higher Secondary/Diploma, 29.3% possessing a Bachelor's degree (44), 28.7% possessing a Master's degree (43), and 29.3% possessing a Doctoral degree (44). The occupation data indicates that 24.0% of the population are government employees (36 individuals), 23.3% are employed in the private sector (35 individuals), 21.3% are retired (32 individuals), and 31.3% have any other occupation (47 individuals).

Table 4: Independent Samples T-Test

| <b>Independent Samples Test</b>                                       |                             |  |       |                              |         |                 |
|---|-----------------------------|--|-------|------------------------------|---------|-----------------|
|   |                             | Levene's Test for<br>Equality of Variances |       | t-test for Equality of Means |         |                 |
|   |                             | F  | Sig.  | t                            | df      | Sig. (2-tailed) |
| The e-governance framework in Sudurpashchim Province                  | Equal variances assumed     | 8.246                                      | 0.005 | 3.466                        | 148     | 0.001           |
| encourages active citizen participation in decision-making processes. | Equal variances not assumed |  |       | 3.371                        | 121.535 | 0.001           |
| Citizens can easily access information about government               | Equal variances assumed     | 10.274                                     | 0.002 | 1.686                        | 148     | 0.094           |
| policies, services, and procedures online.                            | Equal variances not assumed |  |       | 1.619                        | 112.524 | 0.108           |



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| The e-governance platforms provide mechanisms for citizens  | Equal variances assumed     | 42.215 | 0.000 | 2.331 | 148     | 0.021 |
|---|-----------------------------|--------|-------|-------|---------|-------|
| to provide feedback on government services.   | Equal variances not assumed |        |       | 2.217 | 105.456 | 0.029 |
| The e-governance initiatives in Sudurpashchim Province enhance  | Equal variances assumed     | 14.516 | 0.000 | 2.083 | 148     | 0.039 |
| transparency in government activities and decision-making processes.  | Equal variances not assumed |        |       | 1.999 | 111.778 | 0.048 |
| There are mechanisms in place to hold government officials  | Equal variances assumed     | 5.009  | 0.027 | 5.230 | 148     | 0.000 |
| accountable for their actions and decisions.  | Equal variances not assumed |        |       | 5.111 | 124.990 | 0.000 |
| Citizens trust that government information provided online is   | Equal variances assumed     | 1.045  | 0.308 | 4.654 | 148     | 0.000 |
| accurate and reliable.  | Equal variances not assumed |        |       | 4.568 | 128.145 | 0.000 |
| Government services are efficiently delivered through   | Equal variances assumed     | 6.112  | 0.015 | 3.310 | 148     | 0.001 |
| online platforms, reducing bureaucratic delays.   | Equal variances not assumed |        |       | 3.218 | 121.434 | 0.002 |
| The e-governance framework  | Equal variances assumed     | 2.733  | 0.100 | 4.189 | 148     | 0.000 |
| improves accessibility to government services for all citizens, including marginalized groups.                                | Equal variances not assumed |        |       | 4.091 | 124.570 | 0.000 |
| Online services are user-friendly and accessible through multiple   | Equal variances assumed     | 12.696 | 0.000 | 4.207 | 148     | 0.000 |
| devices (computers, smartphones, tablets).  | Equal variances not assumed |        |       | 4.059 | 115.718 | 0.000 |
| The IT infrastructure supporting  | Equal variances assumed     | 16.599 | 0.000 | 2.869 | 148     | 0.005 |
| e-governance in Sudurpashchim Province is robust and reliable.  | Equal variances not assumed |        |       | 2.756 | 112.819 | 0.007 |
| There is adequate internet connectivity across the province   | Equal variances assumed     | 1.045  | 0.308 | 4.654 | 148     | 0.000 |
| to support widespread use of e-<br>governance services.   | Equal variances not assumed |        |       | 4.568 | 128.145 | 0.000 |
| Government websites and portals are secure from cyber threats and   | Equal variances assumed     | 42.215 | 0.000 | 2.331 | 148     | 0.021 |
| ensure data privacy.  | Equal variances not assumed |        |       | 2.217 | 105.456 | 0.029 |
| Government officials and employees receive adequate training and support to effectively use e-governance tools and platforms. | Equal variances assumed     | 2.733  | 0.100 | 4.189 | 148     | 0.000 |
|   | Equal variances not assumed |        |       | 4.091 | 124.570 | 0.000 |
| There are ongoing efforts to update and upgrade the skills of   | Equal variances assumed     | 8.246  | 0.005 | 3.466 | 148     | 0.001 |
| personnel involved in e-governance initiatives.   | Equal variances not assumed |        |       | 3.371 | 121.535 | 0.001 |
|   | Equal variances assumed     | 14.516 | 0.000 | 2.083 | 148     | 0.039 |



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| Equal variances not assumed | 1.                          | .999                          | 111.778                           | 0.048                                     |
|-----------------------------|-----------------------------|-------------------------------|-----------------------------------|---|
|                             |                             |                               |                                   |   |
|                             |                             |                               |                                   |   |
|                             |                             |                               |                                   |   |
|                             | Equal variances not assumed | Equal variances not assumed 1 | Equal variances not assumed 1.999 | Equal variances not assumed 1.999 111.778 |

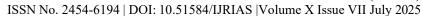
The results of an analysis that compared perceptions of various aspects of the e-governance framework in Sudurpashchim Province, Nepal, are presented in the Independent Samples Test table 4. The Levene's Test for Equality of Variances and the t-test for Equality of Means are both included in the table. The Levene's test assesses the assumption of equal variances between groups for each statement. The variances are unequal, as indicated by a significant Levene's test (p < 0.05). In such instances, the t-test results are employed without presuming equal variances. The t-test for Equality of Means evaluates the existence of a substantial disparity between the means of the two categories. The table presents two scenarios: one that assumes equal variances and another that does not. For example, the statement "the e-governance framework in Sudurpashchim Province encourages active citizen participation in decision-making processes" yields significant results in both Levene's test (F = 8.246, p = 0.005) and the t-test (t = 3.466, df = 148, p = 0.001), suggesting a substantial disparity in perceptions. In the same vein, other statements, such as "The province has sufficient internet connectivity to facilitate the widespread use of e-governance services" and "Government services are efficiently delivered through online platforms, reducing bureaucratic delays," also exhibit substantial discrepancies. The corresponding t-test results confirm significant differences in perceptions (t = 4.654, df = 148, p = 0.000), and statements with non-significant Levene's test (p > 0.05), such as "Citizens trust that government information provided online is accurate and reliable," indicate equal variances. The table demonstrates substantial disparities in perceptions regarding the e-governance framework's various components, emphasizing areas of strength and potential for refinement.

#### **CONCLUSION**

In Sudurpashchim Province, Nepal, the study on the effective implementation of an e-governance framework has identified several critical factors that are essential for success. The following are included: comprehensive capacity-building initiatives, transparent and accountable governance practices, efficient service delivery mechanisms, enhanced citizen engagement, and robust technological infrastructure. The integration of these factors has the potential to substantially enhance administrative efficiency, reduce bureaucratic inefficiencies, and promote transparency and accountability within government operations. This research has achieved a comprehensive comprehension of the opportunities and challenges associated with the establishment of a resilient e-governance framework in the province by utilizing a mixed-methods approach that integrates both qualitative and quantitative data. The results are a valuable source of insight for policymakers and stakeholders who are trying to enhance public service delivery and advance digital governance in Sudurpashchim Province. Several critical factors that contribute to an effective e-governance framework in Sudurpashchim Province, Nepal, have been identified in this study. The significance of citizen engagement, transparency and accountability mechanisms, efficient service delivery models, robust technological infrastructure, and comprehensive capacity building initiatives is underscored by key findings. These characteristics are essential for the expansion of trust between citizens and government institutions, the promotion of inclusive development, and the improvement of governance efficiency. In order to meet the changing requirements of the diverse population of Sudurpashchim Province and to sustainably enhance governance outcomes, policymakers and stakeholders should prioritize these elements.

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