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## Analysis and Assessment of the Digitization Process of Georgia

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### Abstract

This article examines the state of digitization among sovereign states and analyzes Georgia's position in the ongoing process in general, at the regional and subregional levels. The research in the paper is conducted using international indicators and is mainly based on the UN Index and its sub-components. The development growth rate has been dynamic since 2012, as the index's normative adoption rate in percentage terms in 2012 it was 56% and in 2024 - 78%. The review and ranking of indicators revealed that Georgia's position in the rating lists is dynamic, sub-indicators capture the strengths and weaknesses of the process.

Overall, the index indicators allow for predictions and recommendations. In terms of digitalization, the country moved into the VHEGDI, in other words, it has moved into a very high-level group and is a leading country in the South Caucasus in this regard.

**Keywords:** Digitalization Process; International Indicators; UN Indexes Index and Sub-components.

### Introduction

At the end of the 20th century, the technological revolution expanded the scope of communication tools, and developed countries began to implement e-government to increase the efficiency of government work. At the beginning of the 21st century, modern digital technologies made it possible to bring together government units in a single system and exchange information worldwide.

E-government is a structured digital government, a modern type of management discipline, and its goal is to "create opportunities for the rapid delivery of quality services" (Kardava E., და სხვ., 2021) for the user.

The process of digitization is regulated by e-government, and accordingly, the topic of the article is discussed together with all its constituent units (citizens, state, business), since the e-government development index indicator also provides us with accurate information about the level of digitization of participators. We live in a digital era and the issue discussed in the article about the formation of digital culture is a product of the ongoing process, i.e. globalization.

Georgia easily adapts to digitalization, the human resource development indicator shows readiness, and the rating lists reflect the high indicators of the country's development. The aim of the paper is to analyze the digitalization process in a historical-territorial context by involving indicators and ranking data, and in the article we present an assessment of Georgia's position in this process.

## Main Text

The achievements of the "Electronic Revolution" of the last century - the creation of the computer and the first communication network - became the reason for the acceleration of the pace of development. It became clear to everyone that the network could form new forms of relations, and by the end of the twentieth century, developed countries began to implement technological reforms. The "Informational/Digital Revolution" entered an active phase from the first decade of the 21st century, after the adoption of relevant legislative changes and the involvement of developing countries in the process. In the process of digitization, several models of digital governance were formed in accordance with the requirements of users. The type oriented to the civil sector is considered the Continental-European model, and the type focused on the simplification of state services is considered the Anglo-American model. The third type is the Asian model, which actively introduces digital skills in the fields of culture and education. Paraphrase from the textbook of scientist G. Jolia. (Jolia, 2021)

Due to its geographical location, Georgia is a member of the Asian global region, and therefore, to maximize the realization of digitalization, it is important to take into account the experience of successful countries in this region that occupy a leading position in the global list. The Asian region is in second place in the list of world regions according to the 2024 index, behind Europe and ahead of America.

The level of digitization of countries is assessed by indices developed by various international organizations and institutions. Today, the exact definition of the term indicator is not fixed, since it was created in parallel with "Digitization" and is being formed along with the ongoing process. However, we have the opportunity to give an assessment based on its properties as a social and technological unit based on mathematization, which simplifies the processing of voluminous information, identifies the causes of delays and allows us to make predictions. (Kevin E. Davis, Benedict Kingsbury, & Sally Engle Merry, 2024)

The digitization process in Georgia is carried out by various state agencies and this process: is managed by "the Georgian Innovation and Technology Agency" (Gurtskaia Tatia & Paliani Sofia, 2023)

International cooperation is presented on the ICT cluster platform [ictcluster.ge](http://ictcluster.ge), Georgia's indicators in global statistics are quite good. For example: ease of starting a business is second, ease of doing business is sixth, contract enforcement is eighth, etc. Georgia has an above-average GCI index among developing economies. Georgia is ranked 57-th among 100 countries by the DIGX index of the quality of use of information and communication technologies. A good indicator is recorded by the Human Development Index-HDI Georgia is a "Highly Developed" country.

The United Nations publishes the EGDI index data every two years, which involves assessing the development of national governments of 193 sovereign states and placing them in ratings. The involvement of the Georgian government in the digitalization process has been recorded since 2003.

The dynamics have been recorded since 2012, and this is due to the good implementation of programs supporting digital development.

The index norm is a single whole and is divided into four groups according to the level of approximation: very high level from 0.75 to 1.00, high level from 0.50 to 0.75, medium level from 0.25 to 0.50 and low level from 0.00 to 0.25 inclusive.

The EGDI index consists of three units: OSI, TII and HCI. The OSI index consists of five components: IF, SP, CP, TEC, EPI. (<https://publicadministration.un.org/>, 2024)

The definitions of the indices and sub-indicators are presented along with the analysis and the following findings were identified.

1. The level of convergence of Georgia's Development Index with the norm was determined at 42% until 2012. In 2012-2022, an increase in data was recorded, Georgia moved to the high group of the rating list and occupied 71.7% of the norm. In 2022-2024, the country's place was recorded in the very high group and approached the norm by 78%. This is considered an achievement based on the increase in the value of the sub-indices. In 2003-2012, Georgia's place in the rating list alternated between 83rd and 100th places. In 2012-2024, against the background of an increase in values, a shift was recorded in the rating list and until now its place has been steadily alternating between 56th and 69th places.

2. The Human Capital Index -HCI measures human resource capabilities and it is noteworthy that Georgia has consistently been in the very high value group from 2003 to 2024.

3. The state of telecommunications infrastructure is measured by the TII sub-index. From 2003 to 2012, the value of this index was consistently considered in the low group, since 2014 it has been gradually increasing and in 2024 it moved to the very high value group.

4. The volume and quality of electronic services are measured by the OSI index and their indicators and definitions are presented below. In 2003-2010, Georgia occupied a place in the low and medium group according to the OSI index. In 2012-2024, the position moved to the high group. The maximum in numbers was recorded in 2018, when the percentage of normative adoption approached 0.69%. Overall, the increase in the index value in 2012-2024 is assessed as a good indicator, since, unlike other indices, it remains in the high group. This is explained by the fact that, except for the EPI-Electronic Participation Index, all other indicators maintain their position, this applies to CP-content summary, SP-service delivery, IF-Institutional Framework and TEC-technological indicators. The most variation in decline has been recorded in the TEC technological indicator. Based on this, we draw the following conclusions.

1) In historical terms, i.e. in general, in 2003-2024, a change in the development trajectory was observed in 2012 and the risks of degradation were completely eliminated.

- The dynamics of the digitalization process in Georgia began in 2012.

- According to the Human Development Index, Georgia maintains its position in 2003-2024 and is consistently in the high-performing group of countries in the world. The stability of the data and its high value for 21 years indicate that human resources are distinguished by very high receptivity.

- Telecommunications infrastructure data for 2012-2024 are assessed as an indicator of above-average development.

- The electronic services index remains in the high group.

2) In territorial terms, Denmark leads the world ranking list from 2018 to 2024. France, Estonia, Liechtenstein and other European countries from time to time maintain leading positions in the sub-indices, which is natural, since the European global region leads the list with a score of 0.84. Asia, which is currently ahead of America and its data is 0.69, is in second place in the same list. The leading places in the Asian region are shared by Singapore, South Korea, Saudi Arabia and the United Arab Emirates. Since 2022, Georgia has been included in the highest-level group of the EGDI worldwide and, together with the developed countries of Asia, has been included in the list of the highest-rated countries in the region. It occupies a good place in the West Asian sub-region and Georgia is a leading country in the South Caucasus.

The historical and territorial ranking of international indicators revealed the weaknesses and strengths of the current process. Despite many negative facts, Georgia gradually overcame the challenges and in 2012 moved to the high-level group in terms of digitalization. In 2022, it moved to the very high-level group. The frozen conflict did not affect the digitalization process that has been actively underway since 2012. Obviously, we consider the current internal political instability to be the weak side of the digitalization process, or the main factor hindering digitalization. The indicator analysis confirms that, overall, Georgia has mastered the full spectrum of digital transformation, which implies a high level of ICT implementation and the formation of an increasing dynamic of the digitalization process. Public acceptance of digitization is high, and we believe that technological support for scientific structural units is necessary for the rapid development of this process.

## Conclusion

The digitization process is actively underway all over the world, and in this regard, Georgia took a number of important steps in 2012-2024. Today, the country is represented by the EGDI index as one of the high-performing countries in the world in the digitization process, as the index indicator in 2022 was 0.7501 and with this value moved to the very high level-VHEGDI group. Georgia was placed on the list of high-performing countries in the Asian region and is a leader in the introduction of digital services in the South Caucasus. In 2024, Georgia is again in the very high level group and maintains its position, which is undoubtedly a great achievement for the country given the ongoing political process. It is also worth noting that in 2024, an increase in the level of digitization was also recorded to the denominator [0.7792], which, in our opinion, is considered a success, since the level of approximation to the norm was determined at 78%. The ranking and analysis of the indicators revealed that the indicators have a positive trajectory in global indices, society is ready for new transformations, and Georgia has the potential to be one of the leading countries in the Asian region in terms of digitalization.

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## საქართველოს გაციფრების პროცესის ანალიზი და შეფასება

### სოფიო ფალიანი

საქართველოს ტექნიკური უნივერსიტეტის ბიზნესტექნოლოგიების ფაკულტეტის, ბიზნესის ადმინისტრირების დეპარტამენტის დოქტორანტი, E-mail: [s\\_paliani@yahoo.com](mailto:s_paliani@yahoo.com)

### ანოტაცია

წინამდებარე სტატიაში შესწავლილია გაციფრების მდგომარეობა სუვერენულ სახელმწიფოთა შორის და გაანალიზებულია საქართველოს პოზიცია მიმდინარე პროცესში ზოგადად, რეგიონის და ქვერეგიონების დონეზე. ნაშრომში კვლევა ჩატარებულია საერთაშორისო ინდიკატორებით და ძირითადად ეფუძნება გაერო-ს ინდექსს და მის სუბ-კომპონენტებს. განვითარების ზრდის მაჩვენებელი დინამიურია 2012 წლიდან, რადგან მითითებული ინდექსის ნორმატივის ათვისების მაჩვენებელი პროცენტებში 2012 წელს შეადგენდა 56%-ს და 2024 წელს კი - 78%-ს. ინდიკატორთა განხილვით და რანჟირებით გამოვლინდა, რომ სარეიტინგო სიებში საქართველოს პოზიცია დინამიურია, ქვეინდიკატორები აფიქსირებენ პროცესის ძლიერ და სუსტ მხარეებს. მთლიანობაში ინდექსის მაჩვენებლები იძლევა პროგნოზირებისა და რეკომენდაციის გაცემის საშუალებას, ქვეყანამ გაციფრების კუთხით 2022 წელს VHEGDI, ე.ი. ძალიან მაღალი დონის ჯგუფში გადაინაცვლა და ამ მხრივ წამყვანი ქვეყანა სამხრეთ კავკასიაში.

**საკვანძო სიტყვები:** გაციფრების პროცესი; საერთაშორისო ინდიკატორები; გაეროს განვითარების ინდექსი და ქვეკომპონენტები