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Comparative study on the analysis of digital governance in Romania and Bulgaria

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Abstract. Digital government boosts countries' economic growth and brings important benefits. This way, it involves the use of communication and information technologies by the public sector to improve the delivery of services and information by encouraging citizens to participate in the decision-making process and the holding government accountable in an effectively transparent way. Digital government offers new opportunities for more convenient and direct citizen access to government and the delivery of government services directly to citizens. This paper aims to provide an analysis of Romania and Bulgaria's digital governance compared to the European Union, highlighting the evolution of digitisation in recent years. Although they joined the European Union at the same time, the applicability and timeliness of digital technologies differ from country to country, with Romania and Bulgaria always compared to each other in their evolution over the years.

Keywords. Digital governance, level of digitisation, digital services, Romania, Bulgaria.

1. Introduction

Governance has become a central theme in open innovation to coordinate the exchange of effective knowledge between collaborators (Cavallo et al., 2021), and in this way, Europe has a digital transformation that strengthens our democratic values, respects our fundamental rights, and contributes to a sustainable economy, climate-neutral and efficient with reference to resource use. The European Union is making itself responsible for global standards for emerging technologies and will remain the most open region for trade and investment in the world, with the condition that anyone who comes to do business here accepts and respects the rules imposed.

Digital government involves the public sector's use of communications and information technologies to improve the delivery of services and information by encouraging citizens to participate in decision-making and holding the government accountable in an effectively transparent way (PwC Romania, 2018).

Romania, as a member state of the European Union, has evolved in terms of technology over the last 20 years, mostly since 22 February 2001, when a working group was set up with the main objective of implementing the information society in our country (Government Decision No. 271/2001). At the moment, it can be said that Romania is still at the beginning

towards efficient digitisation of public services provided by central and local public administration agencies and authorities, although legislative initiatives and European Union policies have encouraged the use of online tools and promoted digitisation in Romanian society, as demonstrated by the number of people accessing national public administration websites.

Since 2001, the Republic of Bulgaria has also been working constantly to establish an e-government (SEGA). The government of the Republic of Bulgaria provides a modern and efficient government while using the tools of contemporary information technologies to meet the real needs of citizens and businesses at any time and in any place (Gerunov, 2019). E-government in Bulgaria has often been mentioned as one of the main priorities of several governments over the last fifteen years and is due to the integration into the pan-European policy for the provision of e-services to EU citizens (Petrov, 2020). Its implementation is a reflection of the vision of democratic management of processes and phenomena in society and the application of specific principles of law in the state.

Based on data provided by the European Commission through Eurostat, this paper analyses digital governance in Romania and Bulgaria compared to the European Union, highlighting the evolution of digitalisation in recent years. The purpose of the study is to use the indicators analysed to highlight the level of digitisation of public administration in Romania and Bulgaria, the neighbouring Member States that joined the European Union at the same time, in comparison with the European level. The study was based on the analysis of data on the most recent e-government indicators for Romania and Bulgaria compared to the EU average.

2. E-government

Governance requires adequate resources to manage citizens for the common good (Bannister and Connolly, 2015). To achieve this, many governments have created an e-government system. This e-government system has a lot of benefits for municipalities and citizens. Digital transformation of the public sector improves efficiency and supports democratic processes for democratic subjects - citizens (Janssen and Wimmer, 2015).

E-government (short for the digital government) is the use of information technology applications and technological communication devices, such as computers and the internet, to provide various public government services to citizens or people in a given country or region (Malodia et al., 2021). This way, e-government is an effective one and can provide a wide variety of benefits, including more efficiency, where government saves business, increasing, and greater involvement of citizen participation in public life.

Citizen-driven e-government initiatives strategically use information technology to deliver government products or services to targeted users, leading to increased value (Finger and Fouzia, 2012), yet the actual implementation of technology in the public sector has remained limited (Tan, Mahula and Cromptvoets, 2021).

Ciobanu et al., 2020 consider that the economic growth of countries due to digitization has the potential to boost productivity, create new jobs and improve the quality of life for society in general.

3. European eGovernment services

Digital information and communication at the European level are already used by governing bodies, as it is in businesses, but eGovernment involves more than tools, namely rethinking organisational processes and changing behaviour so that public service is delivered effectively to more people. Therefore, good implementation of digital governance empowers citizens, businesses, and organizations to take care of their entities with much easier, faster, and low-budget governance (Gilig-Micu, 2002).

The European Parliament resolution on the *EU eGovernment Action Plan 2016-2020* considers that „public administrations should be open, transparent, efficient and inclusive, offering borderless, personalised, user-friendly, accessible and end-to-end digital public services to all citizens and businesses in the EU by 2022, thereby reducing costs, barriers and administrative burdens for citizens and businesses, in particular SMEs, and thereby reaping the full benefits of the digital revolution” and to this end, public administrations are to make the full transition through a fair restructuring towards digital technology.

E-government delivers models that are divided into the following categories: interaction that is part of citizen communication with all levels of government (state/province, city, international and national), facilitating citizen engagement in government that is done using information and communication technology, and business process redesign. This way, European countries have embraced the digitisation of governments in line with the guidelines provided by the European Union through the *EU eGovernment Action Plan 2016-2020*, to accelerate the digitisation process among its members, who would otherwise not be able to keep up on their own. Digitisation also enables businesses to create products tailored to customer tastes while changing the way companies manage their production assets. This digitisation has allowed companies to shift labour-intensive tasks to emerging economies while competing to develop the best design and connection with users.

On the other hand, at the EU level, the basic cross-border public service provided to citizens and businesses is „Your Europe” which refers to „life and travel”, as it is a one-stop-shop of the European Union that aims to simplify the lives of citizens and businesses, avoiding unnecessary inconvenience and bureaucracy in „living and travelling” as well as „doing business” abroad.

To do this, „Your Europe” provides information on basic rights under European Union law, but also on how these rights are implemented in each country. There is also free contact by e-mail or telephone with the European Union's helpdesk for more personalised or detailed assistance and advice.

In most cases, the European Union rights described in Your Europe apply to all EU Member States plus Iceland, Liechtenstein, Norway, and sometimes Switzerland. Information on this programme is provided by the relevant departments of the European Commission and complemented by content provided by the authorities of each country it covers. As the website comprises two sections - one for citizens and one for businesses, both managed by DG (Directorate-General, a type of specialised administrative body in the European Union), Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) - the services are listed under the main service groups for each section. This way, the European Union's digital public administration services that can be found on the sites are divided into:

1. *Citizen service groups*: Travel (documents needed to travel to Europe), Work and retirement (e.g. unemployment and benefits), Vehicles (registration), Residence formalities (e.g. elections abroad), Education and youth (e.g. researchers), Health (medical treatment abroad), Family (e.g. couples), Consumers (e.g. shopping).

2. *Service groups for business management*, covering Running a business (e.g. business development), Taxes (e.g. business tax), Selling in the European Union (e.g. public contracts), Human resources (e.g. employment contracts), Product demand (e.g. standards), Finance and investment (e.g. accounting), Customer interaction (e.g. data protection).

In terms of business management in hypercompetitive conditions, Micu, Aivaz, and Capațină (2013) conclude that the quality of logistics services can be considered a critical success factor and differentiation tool; the major challenge facing online retailers is to respond effectively to the rapid changes in customer behaviour. Also, an empirical study by Aivaz

(2021a) shows an accelerated dynamics of financial indicators, a potential explanation being provided by the multitude of types of activities subordinated to the group of business support activities (use of technologies), activities that have been able to adapt to the requirements of responsible and sustainable development; in this sense, the results of another study reveal that there are incentives pointing that the fixed assets management contributes to the achievement of operational turnover (Aivaz, 2020).

4. Digital governance in Romania

The evolution of digital governance in Romania is closely linked to the increased use of digital tools by citizens, public authorities, and institutions. The Romanian government, in a democratic framework, is an administration that uses public resources to work and meet the needs of citizens.

Romania ranks last among the Member States in terms of digital services, and in terms of e-government, there is an increase, even if there is a consistent difference compared to the EU average (Vrabie, 2015). Although it has had an increase in the number of services provided online, Romania is in last place due to: uneven digital infrastructure in public institutions; deficient legislative framework in the field of digitization; a rather long delay in the implementation of the Digital Agenda from 2014 to 2020; lack of interest in the development of digital skills essential in the administrative apparatus; a population that has a lack of confidence in terms of online platform (PwC Romania, 2018).

The level of digital literacy in our country is low, with Romanians using the internet for entertainment, social networking. In addition, Romania faces a significant gap between urban and rural areas in terms of internet coverage (only 40% coverage in rural areas), according to the European Commission's *2020 Country Report on Romania*.

Although our country has lagged in the digitisation of government, according to the European Commission's report we are quite close to the top in very high-speed services: „Romania performs best in the Connectivity dimension, due to high use of very high-speed broadband and wide availability of very high capacity fixed networks, especially in urban areas. 49% of households in Romania subscribe to very high-speed services (at least 100 Mbps), ranking Romania 5th in the EU. The digitalisation of the economy has lagged, with almost a fifth of Romanians having never used the internet and less than a third having at least basic digital skills. Romania is well-positioned in terms of ICT graduates, ranking fifth with 5.6% of all graduates (EU average: 3.6%); however, in terms of digital public services and use of internet services, Romania's performance is the lowest among the EU Member States”.

Today, companies and people can get information faster and at any time of the day compared to the past. E-government and its capability could be available to all people regardless of their location or social level (Milev, 2018). In short, more efficiency, improved services to better serve citizens, better accessibility of public services, greater transparency, and accountability of public administration are the expected benefits of e-government.

This way, the *National Digital Agenda Strategy for Romania 2020* defines the framework of an institutional structure that will provide a unified vision, manage centrally and in a coordinated manner all aspects of the computerisation of public services and the achievement of interoperability at the European level (Government Decision No. 245/2015).

5. Digital governance in Bulgaria

In Bulgaria, progress in governance is mainly associated with the development and upgrading of infrastructure elements and main systems, as well as the equipping of judicial and local administrations with information and communication technology (ICT) facilities, the existence

of websites and electronic information and services offered through them, and large-scale training of state officials in IT skills (Petrov, 2020).

The Bulgarian government has developed an e-government strategy to make the Bulgarian economy more competitive and at the same time meeting the needs of its citizens and businesses through efficient and effective administrative services (Daskalova, 2019). According to the *Digital Public Administration factsheet - Bulgaria* (2020), the main eGovernment activities focus on: Development of central eGovernment systems, including the creation of an eGovernment web portal and the launch of a communication strategy to inform the public about eGovernment and safety when using these systems and the services provided; support for regional and local administrations, i.e. one-stop-shop services for regional administrations and technical assistance for municipal administrations (hardware, software and eGovernment best practices); training of administration staff in IT and the use of eGovernment services; training can be divided into training for IT specialists and mass training for administration staff.

The Strategy for the Development of Digital Governance in the Republic of Bulgaria (2014-2020) was developed as part of the country's commitments in the prerequisites for the European Union funds for the 2014-2020 programming period. Its main objective is to outline the framework for all current and new activities in the field of e-government (SEGA).

6. Case study: analysis of eGovernment in Romania and Bulgaria compared to the European Union

The analysis on eGovernment was based on data provided by Eurostat on the most recent eGovernment indicators for Romania and Bulgaria compared to the EU average for 2020. With the help of the indicators established by the European Commission, an assessment of the actual situation of eGovernment in the two neighbouring countries will be made.

6.1. Research objectives

The work aims to analyse the level of digitisation of public administration in Romania and Bulgaria in comparison with the European Union, using specific indicators established by the European Commission.

The research hypotheses in the context of the development of the 21st century: Romania has a low level of digitisation, Bulgaria has a high level of digitisation of public institutions and the European Union has a visible digital transformation in public administration. The research hypotheses formulated, following the analysis of the data, will confirm or refute what is the real level of digitisation in Romania and Bulgaria compared to the European Union.

6.2. Research Methodology

The research method used in this paper is the case study, which is a method that is defined mainly by circumscribing the research to a specific entity, opting for the study of official documents and statistics made on the official website of the European Commission's Eurostat information society indicators for 2020.

The research was based on the data provided by the most recent report on e-government, at the level of the European Union Member States, through the indicators used.

The analysis of the data collected for the case study performs the analysis of e-government indicators in Romania and Bulgaria based on specific indicators used in three groups (the first group includes five indicators, and the second and third groups consist of four indicators). The specific indicators used in the analysis are:

I. Digital public administration indicators: key elements, user-centricity, transparency,

cross-border mobility of citizens, cross-border mobility of businesses.

- a. *Key element* – indicates the extent to which the technical and organisational prerequisites for the provision of eGovernment services, such as electronic identification and authentic sources, are in place.
- b. *User centricity* – indicates the extent to which a service is provided online, the ease of use of the mobile service (in terms of available online support and feedback mechanisms), the responsibilities and performance of public organisations, and the personal data processed within public services.
- c. *Transparency* – indicates the extent to which governments are transparent about the service delivery process, the responsibilities and performance of public organisations, and the personal data processed in public services.
- d. *Cross-border mobility of citizens* – indicates the extent to which citizens can use online services.
- e. *Cross-border mobility of businesses* – indicates the extent to which users of public services in another European country can use online services.

II. Indicators of digital public administration: policy communications, governance, legislation, infrastructure.

- a. *Political communications* – are the forms of communication that accompany the work of public institutions in the general interest. This way, public communications must make citizens aware of the existence of public sector organisations, the way they operate and their powers, the legality and appropriateness of decisions taken. At the same time, public communication is intended to make known the needs and desires of the population so that public institutions, through their role and powers, can meet them, this way achieving a general interest.
- b. *Governance* – refers to the coordination, collaboration, and understanding between the actors of political organisations and civil society that together make the actions of a government possible.
- c. *Legislation* – is the totality of the laws in force at a given time in a state or other entity or a field.
- d. *Infrastructure* – is the set of principles, methods, and devices (objects) used as a whole to provide a service.

III. Performance of digital governance in public priorities.

The percentage of citizens using the internet to interact with public services is analysed using the following indicators:

- a. *Interaction with public authorities* – refers to individuals who use the Internet to interact with public authorities;
- b. *Obtaining information* – refers to people using the internet to obtain information from public authority websites;
- c. *Downloading official forms* – refers to persons who use the Internet to download official forms from public authorities;
- d. *Sending completed forms* – refers to persons who use the internet to send completed forms online to public authorities.

6.3. Results and discussion

The analysis carried out in this study is based on data on the most recent e-government indicators for Romania and Bulgaria compared to the EU average.

I. Digital public administration indicators: key elements, user-centricity, transparency, cross-border mobility of citizens, cross-border mobility of businesses.

Figure 1 gives an overview of the benchmarks measured for Romania and Bulgaria compared to the EU average level.

Figure 1. Digital public administration indicators

The key elements indicator shows the five technical preconditions, where Romania has a percentage of 22%, Bulgaria shows a percentage of 42%, while the EU average is above 60%.

Cross-border mobility - EU users who want to obtain a service from another European country can do so in 51% of services for citizens and 67% of services for businesses. Bulgaria is very close to the EU average percentage, with 65% for cross-border mobility for businesses and 31% for cross-border mobility for citizens. Romanian citizens use their own national eID solution for only 33% of services in other countries. For businesses, this figure reaches only 20%. This indicates the extent to which EU citizens and businesses can use online services from another country.

Transparency indicates the extent to which governments are transparent about their responsibilities and performance, service delivery process, and personal data. Romania's transparency is 50%, Bulgaria's 53%, compared to the European average of 66%.

User centricity indicates the extent to which information about a service is provided online and how this is perceived. According to the graph shown, 70% of information is provided online in Romania, 78% in Bulgaria, close to the European average of 87%.

II. Indicators of digital public administration: political communications, governance, legislation, infrastructure.

II.1. Romania indicators

Policy communications: in the first quarter of 2019, Romania developed a policy to improve and promote the availability of eCommerce solutions across the country, in line with European Commission guidelines.

The document provided an overview of the state of development of eCommerce and presented the main strategic directions and objectives for the future. The strategy was

accompanied by an action plan which detailed a list of actions and deadlines for each of the strategy's objectives.

The main objectives set for the development of eCommerce solutions in Romania are the creation of a coherent and consistent regulatory framework for the commercialisation of Internet services, informing suppliers and online service providers about eCommerce solutions, and strengthening the institutional framework for eCommerce.

Governance: The Romanian Digitalisation Authority (RDA) is the new public institution, coordinated by the General Secretariat of the Government, which now has executive control over the Government. It is also in charge of the coordination of all operating systems that are related to the delivery of eGovernment services and the coordination of information systems through which eGovernment services are delivered.

Legislation: Emergency Ordinance No. 62/2019 amends and adds new features to Emergency Ordinance No. 34/2008 regarding the organisation and operation of the Single National Emergency Call System and Emergency Ordinance No. 111/2011 on electronic communications.

Infrastructure: Romania has a central platform for public procurement which is under the responsibility of the Romanian Digitisation Authority (RDA). All contracting authorities in Romania are obliged to publish their notices in public procurement procedures and all companies aiming to supply products or services to a public authority must have access to the platform. This system simplifies procedures for both suppliers and procurement agencies. The system is the only national point for sending public procurement notices to the Official Journal of the European Union.

II.2. Indicators for Bulgaria

Political communications: At the end of 2019, the Council of Ministers adopted the National Digital Agenda 2025 and the roadmap for its implementation. The programme is a continuation of the Digital Agenda 2015 national programme, building on both its achievements and the new European strategic and programmatic orientations to achieve smart, sustainable, and inclusive digital growth by 2025.

Digital Bulgaria 2025 aims to modernise and promote the implementation of smart IT decisions in all areas of the economy and social life. The national programme has set out the objectives, measures, and activities related to the development and widespread use of ICT, as well as the commitment of different institutions in their sectoral policies.

The Republic of Bulgaria has updated its vision and policy set out in the Strategy for the Development of eGovernment in the Republic of Bulgaria 2014-2020, extending the time horizon for its implementation. The updated strategy ensures the implementation of the current European eGovernment principles introduced at the national level and is based on the achievement of the targets after 2018.

Governance: Responsibility for communication strategy/policy in the field of transport, information technology, and communications (MTITC). Responsibility for interoperability activities and eGovernment policy lies with the State eGovernment Agency (SEGA).

Legislation: At the end of 2019, the Bulgarian Government amended the eGovernment Act to transpose Directive 2016/2102/EU of the European Parliament and of the Council of 26 October 2016 on the accessibility of websites and mobile applications of public sector organisations. SEGA's control functions have been strengthened. In addition, to guarantee the authenticity of exchanged electronic documents and declarations, the means of electronic identification and the regime for their recognition have been regulated, as well as the establishment and maintenance of an electronic authentication system.

In mid-2019, the Ordinance on Minimum Requirements for Network and Information Security entered into force. This repeated the existing Ordinance on General Requirements for Network and Information Security. Its adoption improved the regulatory framework for network and information security in line with the Cyber Security Act.

Infrastructure: In November 2019, Bulgaria launched an e-procurement process. The introduction of the single national e-procurement platform was an important step towards the digitisation of public services within the country.

For the purpose of cross-border e-identification, an eIDAS node was developed and deployed in a production environment in line with the requirements of Regulation (EC) No 910/2014.

The „open data portal” was created which is a single, central, public, web-based information system providing for the publication and management of information for re-use in an open, machine-readable format, together with relevant metadata. The portal has been built in a way that has allowed full retrieval of published information or parts of it.

In August 2018 the public information access platform was launched. It was developed and maintained by the Council of Minister's administration. The platform is a unified, central, public, internet-based information system that electronically ensures the entire process of filing and processing requests for access to information, forwarding to competent bodies, if necessary, issuing a decision, and publishing the relevant information by those obliged under the Law on Access to Public Information, while protecting the applicant's personal data under the Law on Personal Data Protection.

III. Performance of digital governance in public priorities.

Figure 2 provides data on the performance of digital governance within public priorities. It shows that the percentage of people using the internet to interact with public authorities in Romania is 6%, Bulgaria has 10%, while the average in Europe for people using the internet to interact with public authorities is 38%.

Figure 2. The performance of digital governance within political priorities.

Obtaining information from official government websites is at 6% among Romanian citizens, Bulgaria at 12%, while the European average has the highest level of obtaining information at 33%. This shows that the European Union is using digital tools at a high level.

Downloading official forms for 12 months, Europe has a percentage of 44%. This way, the European Union has a developed digital policy compared to Romania which has a percentage of only 9%, and Bulgaria with 12%. It can be seen that in Romania the digital method is not frequently used for downloading forms by citizens. This is confirmed by the following indicator analysed.

This way, while the European Union average using the digital method for *sending completed forms* is 55%, Bulgaria has a percentage of 25%, a high level compared to Romania which has only 12%.

Recent studies (Rus, Tasente and Cămară, 2021) have shown that in public administration, online communication together with access to the information the public needs are important steps for modern, fast, and transparent communication. However, it can be observed that, according to statistical data provided by Eurostat, digital public administration in Romania is the lowest-ranked in terms of citizens' interaction with public institutions' platforms. The public administration infrastructure is ready to provide information, but citizens are probably not aware that they can access digital platforms.

To capture how citizens use the internet to interact with public services, we conducted an analysis of these evolving indicators for the 2011-2020 time horizon.

This way, Figure 3 presents data for the most recent indicators of digital public administration in Romania and Bulgaria compared to the EU average, as provided by Eurostat, namely the percentage of citizens using the internet for interaction with public services.

Figure 3. Percentage of individuals using the internet for obtaining information from public authorities

According to the graph presented, Romania has the lowest percentage of citizens using the internet to *interact with public authorities*. In 2011, 7% of citizens use the internet to interact with public authorities, and by the end of 2020, the situation will be negative, with the percentage remaining the same as in 2011.

This is because Romanians prefer to address public authorities at their offices, but also because some institutions do not communicate digitally.

On the other hand, it can be observed that Bulgarian citizens are active in terms of interaction with public authorities, the percentage being quite high, both in 2011 when it registered 25% and in 2020, reaching 27%.

As for the situation at the EU level, a significant increase can be observed from 2011 when an average percentage of only 41% was recorded, to the end of 2020 when 57% was recorded.

The statistics represented in Figure 4 show that the percentage of citizens using the internet to *obtain information* is very low in Romania. It can be distinguished that Bulgarian citizens are active in terms of interaction with public authorities, the percentage being quite high, both in 2011 when it registered a percentage of 25%, and in 2020, reaching 27%, unlike the EU average which in recent years has remained constant, with a percentage of over 35%.

The statistics are worrying, as Romania's highest percentage was 7% in 2011 and at the end of 2020, in the interval, this indicator is very low. It can be appreciated that Romania uses other methods to obtain information about public authorities.

Figure 4. Percentage of individuals using the internet for obtaining information from public authorities

Citizens using the internet to *download official forms* registered in 2012 the highest increase in recent years in our country, being at the same level as the EU average. Bulgaria registered in 2011 a percentage of 10% and by the end of 2020, an increase can be observed, reaching 15%. Due to low digitisation in the administrative field, Romania reached a percentage of only 13% in 2020. Europe had a significant increase from 2011 where it registered a percentage of 20%, reaching in 2020 a percentage of 38% in downloading official forms (Figure 5).

Figure 5. Percentage of individuals using the internet for downloading official forms from public authorities

Figure 6 shows that the percentage of people who *submit online forms* to public authorities in Romania was high in 2012 (27%) and will decrease significantly to 10% by 2020. Bulgarian citizens use the internet to download official forms in a much lower proportion, with a constant share reaching 14% in 2020.

Figure 6. Percentage of individuals using the internet for sending filled forms to public authorities

The European Union has seen a noticeable year-on-year increase in the use of the internet for sending official forms, reaching an average of 36% by 2020. This is due to the much more advanced digitisation found in some EU Member States.

Most countries in the European Union started the digitisation process more than 15 years ago, with gradual investment to support education in the use of online technologies for both institutions and the population to facilitate their entry into a digital environment. According to statistics (PwC Romania, 2018), the countries with the highest digitalization in Europe are Denmark, Estonia, Switzerland, the UK, the Netherlands, Poland, Lithuania, which also remain among the top economies with high digitalization, due to investments in human capital, adaptability to innovative technologies and infrastructure.

According to the results obtained in the analysis of data on the most recent indicators of digital public administration in Romania and Bulgaria, compared to the EU average, the hypotheses of the research are confirmed, namely, that Romania has a low level of digitization, while Bulgaria has a developed policy of public and private sector digitization. It is clear that Romania needs a well-defined policy on digital governance to reach the performance levels found in the European Union.

7. Conclusions

Quality of life is a key element in the sustainable development of countries, regions, and cities, and when sustainability is considered it must come together in a trans-disciplinary effort to improve living conditions for people (Petrișor, 2013). However, due to the difficulties involved in measuring it, there are no clear criteria on which aspects of the economy should be improved to improve living conditions. An interesting study conducted by Aivaz (2021b) showed that the development of ICT companies by achieving positive economic outcomes not only contributes to the achievement of income-generating economic indicators in the local economy but also actively contributes to encouraging the population towards the use of IT technologies and increasing interest in ICT education. Undeniably, ICT is a significant part of strategies formed not only at the national level but also at the business level because it allows easier and faster communication on a global level. Any improvement in these activities contributes to the implementation of the quality management system (Condrea, Stanciu and Aivaz, 2012), to their integration into economic activity by improving business methods and thus raising living standards.

As the importance of information and communication technologies and services are factors that foster sustainable development, digitisation has become a key driving force in the development of countries. Thus, digital government refers to the public sector's use of software and internet-based technologies to improve the delivery of information to citizens. This enhancement brings about better functioning of the way governments work in the Member States, resulting in more effective public administration.

The comparative study on digital government between Romania, Bulgaria, and the European Union was carried out in terms of analysis of digital government services. The choice of Bulgaria in the presented case study is motivated by the full rights that the two neighbouring Member States, Romania, and Bulgaria, have in the European Union, but also from the point of view of the relations between the two countries, which are based on the *Treaty of Friendship, Cooperation and Good Neighbourliness*, signed in Sofia on 27 January 1992 (Law No. 74/1992). Although they joined the European Union in the same year, the applicability and

timeliness of digital technologies differ from country to country. Romania and Bulgaria are always compared to each other, the two countries always being seen as twin sisters, from their accession to the European Union to their evolution over the years.

Following the analysis of Romania and Bulgaria compared to the EU average in terms of digital public administration, it can be observed that Romanian citizens experience difficulties in interacting with public authorities, obtaining information, downloading official forms, and sending completed forms to public institutions' websites. While Romania is well below the normal standards of digitisation at the European level, Bulgaria is well above our country's average, with advanced digital services. The European Union also has the most developed digital administration and a well-defined strategy for the future of digital technology in citizens' lives, aiming for an open, democratic and sustainable society. At the same time, it can be said that Romania is still at the beginning of the road towards efficient digitisation of public services offered by central and local public administration agencies and authorities, legislative initiatives and European Union policies have encouraged the use of online means and promoted digitisation in Romanian society, demonstrated by the number of people accessing the national public administration websites. On the other hand, the analysed data show that Bulgaria has a transformation of public administration and public institutions into citizen-oriented digital eGovernment services far above the level of our country, close to the average level of the European Union.

From the conducted research it can be concluded that the European Union has a developed digitized government, which is continuously expanding, modernizing Europe's public and private sector, and in this regard, the European Union will establish a new funding program to be implemented in the period 2021-2027 to support the digital transformation of European societies and economies.

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