

The Integration of the Eastern Partnership Countries' Digital Markets into the EU Digital Single Market

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Abstract: The aim of the article is to analyse the motives for integrating the digital markets of the Eastern Partnership countries into the EU Digital Single Market, as well as the challenges and opportunities that this integration creates. The EU Roadmap 'Digital Compass 2030', i.e. the Union's strategic goals for Europe's digital sovereignty, was highlighted. The position of each of the recipient countries of the EaP in the digitalisation indices was represented. The issues and prospects of the integration of digital markets of the Eastern Partnership countries on the way to the EU Digital Single Market were pinpointed. It was proved that both the EU and the member states of the EaP are striving to remain competitive and to not be outsiders of technological transformations. The motivation for the integration of the digital markets of these countries into the Digital Single Market of the EU is, above all, the desire to be a full member of the Community.

Keywords: *digitalisation, digitisation, digital transformation, Eastern Partnership, Digital Single Market*

Introduction

Today, digitalisation is entering a new phase, fueled by the confluence of technologies that are gradually blurring the boundaries between the physical, digital and biological realms, thus expanding their scope of influence. Digital communication, social interaction, e-commerce and digital enterprises are constantly

changing our world, and this can be equated to the same fundamental transformation brought about by the Industrial Revolution. Digital infrastructure, high-speed connectivity, innovation, digital solutions and networks, communication systems, artificial intelligence, and quantum and cloud technologies open up new opportunities for people in various spheres of public life – namely, economic, social, political, cultural and institutional.

Digitalisation also affects the European Union and its interaction with other international actors, shaping the nature of its cooperation. In this context the EU's collaboration with its Eastern partners, based on the promotion of democracy, good governance, economic prosperity and a sustainable society, can be facilitated by the integration of these countries into the EU Digital Single Market. At present, the effective achievement of these goals largely depends on the implementation of digital policy by the countries-addressees of the initiative, given that the COVID-19 pandemic and Russia's armed aggression on the territory of Ukraine has highlighted potential threats in areas such as privacy, cyber security, personal data protection and societal digital incompetence in these countries. The use of digital technologies, the intensification of digital transformations and the adaptation of the states to rapid changes in new digital realities according to EU standards will help the EaP countries to resist these threats.

Meanwhile, the Council of the European Commission approved the concept of the EU digital development up to 2030. In this conception, the goals of digital transformation and ways to achieve it, the so-called 'European Digital Decade', have been formulated. The programme characterises the next decade as specific and ambitious; its main goals can be summarised in four points. The first concerns the digital education of the population and the training of qualified specialists in the field of digital technologies. The second direction is related to the creation of a safe, efficient and reliable digital platform. The third considers the digital evolution of business, and the fourth is about strengthening the digital public sector.

In order to be competitive on the global scale and to guarantee data protection for its citizens, the EU has aimed at technological autonomy. Being an influential global and regional leader, it spreads the trends of the digital agenda to the member countries of the Eastern Partnership, which have unequally integrated into the Digital Single Market of the EU. The reasons behind this are the political regimes in the specified countries and the foreign policy priorities of the member states of the EaP, as well as other varied motives.

Thus, important questions arise: What motivates the EaP countries to integrate their digital markets into the EU's Digital Single Market? What challenges and prospects do they face on this path? And what interest does the European Union have in this process?

Theoretical and methodological aspects of research

The research materials, which analyse and highlight the integration of the digital markets of the Eastern Partnership countries into the EU's Digital Single Market, can be divided into three groups. The first group includes the works that focus on the Digital Single Market Strategy and its three main pillars: access, environment, and economy and society (EU & Me 2019; European Commission 2020a, 2020b; European Commission 2023). Analysts focus in detail as well as on the key goals of the 'Digital Compass for the EU Digital Decade' (Dang & Pheng 2014; European Commission 2021a; European Commission 2020b). Attention is also focused on highlighting the promotion of digital transformation by the European Union in the countries of the Eastern Partnership (Koriavets 2023). Within this group, the 'EU4Digital' Initiative is considered the main driver of digital transformation, which is aimed at spreading the benefits of DSM to the countries of the Eastern Partnership, thereby focusing EU assistance on developing the potential of the digital economy and society (EU Neighbours East 2019).

The next important group of research is aimed at the detailed examination of the digitalisation of the Eastern Partnership countries using different indexes: the E-Government Development Index (EGDI) represents the state of e-government development (Moncada 2017; United Nations E-Government Survey 2022); the Global Innovation Index (GII) reveals the world's most innovative economies by assessing the innovation performance (Dutta et al. 2023; Dutta et al. 2022); and the Network Readiness Index (NRI) ranks a total of 134 economies that collectively account for 95 percent of global gross domestic product (GDP) (Dutta & Lanvin 2022, 2023). Special attention is paid to the Digital Economy and Society Index (DESI) (European Commission 2022). The general digital productivity and the progress of the participating states of the EaP programme were analysed in detail in accordance with the key components of the Index – namely, Ukraine (Nanaeva 2021; Speedtest 2022a, 2022b; Statista 2022; World Bank Group 2016), Moldova (Speedtest 2022a, 2022b; United Nations Development Programme 2019; United Nations Development Programme 2020), Georgia (Galt & Taggart 2018; Hronová 2022; Ministry of Economy and Sustainable Development of Georgia 2023; Speedtest 2022a, 2022b), Armenia (Electronic Government 2023; European Training Foundation 2020; Speedtest 2022a, 2022b; The World Bank Group 2016), Azerbaijan (Lloyds banktrade 2021; Speedtest 2022a, 2022b; Yoon et al. 2019) and Belarus (Cisco 2019; Speedtest 2022a, 2022b; Zoonform 2021).

The last group of research highlights the main challenges (European Commission 2021b; European Society of Occupational Safety & Health 2023; Hronová 2022; Organisation for Economic Co-operation and Development (OECD) 2021) and prospects (European Training Foundation 2020; Official Website of

the Ministry and Committee 2023) of the integration of digital markets of the Eastern Partnership countries to the Digital Single Market of the EU.

The main goal of the EU Digital Single Market is to eliminate unnecessary regulatory barriers and move from separate national markets to a single market with a set of unified European rules in three sectors: telecommunications, trust services and e-commerce (UCEP 2021). However, the overarching motive for digital transformation and unification remains the issue of European Union leadership and its ambitions.

The 2023 Digital Strategy aims to consolidate the EU's perception as a reliable digital leader, a leader in artificial intelligence systems and the data economy. In turn, European Commissioner for Internal Market Thierry Breton, in the context of considering the next digitalisation strategy of the Union, noted that Europe has everything it needs for leading the 'big data' race, preserving technological sovereignty, strengthening its position as an industrial leader and maintaining economic competitiveness for European consumers (European Commission 2020a).

However, according to representatives of the European Economic and Social Committee, digitalisation creates not only opportunities but also challenges for the EU, which calls into question the ability of the European Union to become a leader in the digital sphere today. In particular, it is worth mentioning the vulnerability of the EU's cybersecurity, the mismatch between the growing demand for the latest technologies and their supply, the imperfection of the regulatory framework in this area, problems with the secure transfer of personal data, etc. (European Economic and Social Committee 2019).

According to Dimitar Lilkov, a research officer at the Centre for European Studies, the EU has many ambitions on the development of digital policy, and European leaders use the terms 'strategic autonomy' and 'technological sovereignty' to describe the EU as a 'geopolitical heavyweight' in the field of digital technologies. However, Europe's digital single market faces many challenges that hinder its transformation into a technology hub for global businesses (Lilkov 2023). The very term 'technological sovereignty', as defined by Jakob Edler, Knut Blind, Henning Kroll and Torben Schubert, is the ability of a state or an association of states to supply technologies that are critical to their well-being and competitiveness, as well as the ability to obtain such technologies from other economic actors without forming a unilateral structural dependence on them (Edler et al. 2023).

According to analysts, among the techno-authoritarianism of China and the capitalism of America, Europe is choosing a different path – a move towards greater digital independence. It is noteworthy that the European Union is now a trendsetter in digital policy and is manoeuvring between the advantages of being a 'technological sovereign' and a 'regulatory superpower'. Nevertheless, the European elite is afraid of not preserving the digital potential of Europe,

which, in this scenario, will only be able to imitate the standards set by others (Siebert 2021).

In addition, it is worth citing the opinion of European researchers Timo Seidl and Luuk Schmitz, who describe the EU's 'geo-dirigiste' turn in industrial policy and emphasise that it is the fear of falling behind that has been the driving force throughout all stages of European integration and is still relevant today (Seidl & Schmitz 2023). Under 'geo-dirigisme', scholars understand the idea that markets left unattended cannot provide technological competence and economic competitiveness in the modern world, described by former European Commissioner for the Security Union Julian King as 'geotechnological'. Thus, Timo Seidl and Luuk Schmitz believe that the European Commission, seeking political advantage, has strategically used the concept of technological sovereignty, which is ambiguous and controversial, as a convenient element to unite various actors behind an interim policy programme aimed at the modern rapidly developing market (UN. Secretary-General 1987).

History has shown that actors with different long-term interests can come together under a 'common discursive banner'. In the 1980s, the market discourse was such a 'banner' for the European Union, and today it is technological sovereignty. The use of technological sovereignty is a catalyst for the fact that economic policy cannot be implemented for efficiency reasons alone in a world based on power of various kinds – hard, soft or smart – and in which technology can be used as a weapon in a geo-economic or geopolitical context. In addition, technological sovereignty brings together actors with common goals that form a more stable foundation for cooperation between both groups (Seidl & Schmitz 2023).

Given the above-mentioned trends in Europe's digital transformation, it is important to consider the integration of the Eastern Partnership countries into the EU digital market through the prism of analysing the foundation of the EaP countries' relations with the EU. The EU's Eastern Partnership initiative reflected changes in the formats of the EU's influence on European countries. According to the Dutch political theorist Luuk van Middelaar, the project's launch phase was the embodiment of the 'normative power' of the Union through the spread of common European values, rules and norms (Sydoruk, Pavliuk & Tymeichuk 2022). The concept of a 'normative power' has been developed by Ian Manners, who was confident that the EU is a normative power. Professor Manners explained this due to the way 'it changes the global norms, standards and world politics prescriptions from bounded expectations of state-centricity, acknowledged as the universally applicable by the United Nations system'. The 'normative power' of the European Union is reflected in the ability to share the European norms and standards, ruled by the principles of liberty and democracy, respect for human dignity, rights and the rule of law, into the international communities. In general, Ian Manners described 'normative

power' as the ability of a single international entity to wield its ideological influence over other members within the realm of international relations (defined by the notions of the 'ideological power' and 'power over opinion'). Therefore, the analysed concept itself is not based on the economic resources of the EU, but it instead denotes the capability of spreading European legal and political norms, concepts, discussions and integration criteria, thereby influencing the global landscape through the application of these mechanisms (Manners 2009).

However, the Russian factor, in particular Russia's disinformation and propaganda policy against the EU, as well as Russia's military aggression in Ukraine, has become a significant challenge to the EU's integration policy towards its neighbours. Also, internal political instability and the crisis of values in the Eastern Partnership countries, in particular the divergence of EU values from the interests of the political elites of these states, have become threats to the 'normative power' of the European Union (Sydoruk, Pavliuk & Tymeichuk 2022). Besides, Carmen Decamps, member of the German Association of Energy and Water Industries, compares the EU's 'normative power' to chewing gum, which can be stretched but not without end, as it will eventually become thin and transparent and then break, explaining that the promise of accession to the EU (specifically for Ukraine) should not remain only in words, because then the 'normative power' will lose its attractiveness or collapse (Der (europäische) Föderalist 2023).

Therefore, an important role in the format of EU-EaP relations is also played by the EU's 'transformative power', which is mainly aimed at states that expected something from the Union; in particular, the 'promise of membership' is the biggest reward in this partnership (Sydoruk, Pavliuk & Tymeichuk 2022). 'Transformative power' is one of the instruments for spreading influence to other actors and often involves the formation of relationships based on economic interdependence, including economic factors and the 'attractiveness effect'. The 'transformative power' of the European Union is also linked to the external governance or integration of countries involved in various forms of regional integration. Along with economic incentives, transformative power operates with political instruments to support conditional reforms that are in line with the model of integration of third countries into the European Union. For the most part, the EU's transformative power is activated when the conditions and motives for reforms in other states are shaped in the context of a process that potentially leads to their eventual EU membership. The European way of integration under 'transformative pressure' includes the path to good governance – in particular, anti-corruption measures and public administration reforms. However, an important element of the concept of 'transformative power' is the spread of influence on entities that have a clearly defined goal to be realised as a result of the transformations – in particular, the goal of membership in the Union (Dimitrova et al. 2016).

As practice shows, the EaP countries have different motivations for integration with the European Union and are moving at different paces towards such rapprochement. While Ukraine, Georgia and Moldova intend to become full members of the Union and are making significant efforts to do so, the European integration of Azerbaijan and Armenia is slow under the pressure of Russian influence and uncertainty of intentions. On the one hand, the EU's 'transformative power' cannot be effective in forming relations with Azerbaijan and Armenia, where the motivation for EU membership is too weak. On the other hand, the EU's normative levers have repeatedly proved ineffective in the geopolitical confrontation with Moscow and are faced with the imperfections in the governmental policies of Ukraine, Georgia and Moldova. Thus, scholars Richard Youngs and Kateryna Pishchikova argue that for the successful integration of Eastern Partnership countries into the EU, the Union should combine approaches, acting as a 'geopolitical transformational force', but remain committed to its normative principles. However, in this case, ensuring a balance between the two facets is possible only if there is a strategic consistency in the EU's actions (Youngs & Pishchikova 2013).

It is worth noting that the EU's desire to integrate the EaP countries into a single digital market can be interpreted as a concept of 'geo-dirigisme' and the process of ensuring the EU's status as a 'technological sovereign'. In this context, the use of 'transformative power' by the European Union is based on material incentives – i.e. mutual economic benefit. The benefits of the EU's digital single market are extended to the Eastern Partnership countries through the provision of assistance for the development of digital capacity, which should contribute to economic growth and business development, the creation of new jobs and a rise in living standards. The process of harmonising the digital markets of the EaP countries is a priority, as the EU sees significant prospects in developing the digital potential of its partners.

It is also worth considering the phenomenon of the 'Brussels effect' described by international trade law expert Anu Bradford, which means that the EU market can autonomously transmit its regulatory norms to member states and entities outside its borders. Thus, the EU's task is to regulate its own market, and this in turn becomes a driver of global regulatory influence. In particular, the process of integration of the Eastern Partnership countries into the EU's Digital Single Market shows that the EU's technological sovereignty is the basis for the formation of global standards in the digital sphere, which the Eastern Partnership countries seek to meet even without being full members of the EU. This is largely manifested in the desire of international actors to act in accordance with EU standards for data protection and cybersecurity. In addition, the effective functioning of the EU's Digital Single Market is an example that encourages integration and may even become a factor in EU enlargement. It is important to understand that the 'Brussels effect' has a significant impact on the enlargement

process, as even before gaining membership in the Union, candidate countries are already forced to adopt legal experience and adapt to the standards of the European Union (Bradford 2020).

Thus, the integration of the EaP countries into the EU digital market, despite the prospects and benefits that these states will receive, is part of the EU's action plan to consolidate its technological sovereignty and gain geopolitical leadership. However, as long as there is a potential gain for both sides to be had from harmonising the EaP countries' markets into a single common European space, the EU's undeclared motives do not pose a significant threat but rather create additional incentives. At the same time, the process of the digital integration of Armenia, Azerbaijan, Georgia, Moldova and Ukraine has once again highlighted the weaknesses of the Union's 'transformative' and 'normative' powers due to the historically formed difference in the EaP countries' aspirations for rapprochement with the EU.

There are three terms around which there is still terminological ambiguity – 'digitisation', 'digitalisation' and 'digital transformation'. These three terms have different meanings depending on the context in which they are applied.

The concept of 'digitisation' in its essence refers to receiving analog information and encoding it in a numerical equivalent, so that the computer is able to store, process and transmit it. According to Gartner's IT glossary, 'digitisation is the process of transition from the analog to digital form'. This definition is agreed upon by most scientists and researchers (Gartner Glossary n.d.).

As stated in the Gartner's glossary, 'digitalization is the use of digital technologies to change the business model and enable new opportunities to generate revenue and increase the value'. 'This is the process of transition to a digital business' (Gartner Glossary n.d.). The researchers at the Brookings Institution define digitalisation as follows: 'Digitalization is the process of using digital technologies and information to transform business operations' (Gobble 2018).

The meaning of the third concept, 'digital transformation', is significantly different from those mentioned above. The organisation can implement a series of digitalisation projects, ranging from automating processes to retraining employees to use computers. Digital transformation, on the contrary, is not something that enterprises can implement as projects. Instead, this broader term refers to a customer-driven strategic transformation of, for example, a business that requires end-to-end organisational change as well as the adoption of digital technologies.

Digital transformation has an impact on society as it affects the issues of education, jobs, wages, inequality, health, resource efficiency and security. Digital transformation encompasses five key areas of social life: economic, social, political, cultural and institutional. The economic sphere mainly covers issues of employment and job hunting, as well as the advantages of online stores. The social sphere includes the building of social ties and interpersonal communica-

tion, along with the increase in social capital. The political sphere comprises, among other things, participation in the political process (for example, related to elections) or in non-institutional politics (for example, in public debates on political issues) and civic participation. The cultural area covers cultural activity in the broad sense and the field of education. The institutional sphere includes the use of public services and information, as well as medical services (Małkowska, Urbaniec & Kosała 2021: 329):

The research methodology is based on the empirical quantitative data collected and interpreted in this article. The authors have used the E-Government Development Index (EGDI), the Global Innovation Index (GII), the Network Readiness Index (NRI) and the Digital Economy and Society Index (DESI) to learn, clarify and analyse the levels of the Eastern Partnership states in terms of their digital potential. For the years analysed, the authors used in their research the data of the abovementioned indexes. The system method was used to determine the features of the foundations of the EU digital single market agenda. Thanks to the structural-functional method, the difference between the terms 'digitisation', 'digitalisation' and 'digital transformation' was explained. The comparative analysis allowed for a detailed analysis of the level of digitalisation in the Eastern Partnership countries.

The EU digital market: The agenda and key priorities

The Digital Agenda for Europe envisages the creation of a single EU digital market (EU & Me 2019). The Digital Single Market Strategy was adopted on 6 May 2015 and it is one of the ten political priorities of the European Commission. The main objective of the DSM strategy is to create an area where businesses and consumers have unlimited access to digital goods and services across Europe, with the free flow of data and the environment that is conducive to both competition and innovation, and where the digital economy can grow rapidly and thereby create better economic benefits.

The DSM strategy consists of three main pillars: **access, environment, economy and society**. **Access** presupposes better approach for consumers and businesses to digital goods and services across Europe. As noted in the Strategy, better access to the above services can be achieved by eliminating obstacles in cross-border digital and electronic commerce, and access to digital information content of mass communication media, which in turn will strengthen the protection of consumer rights. **Environment** creates proper and equal conditions for flourishing digital networks and innovative services. The Digital Single Market aims to create an enabling environment for digital networks and services by providing high-speed, secure and reliable infrastructure and services supported by the right regulatory conditions. Key concerns include cyber security, data protection and e-privacy, as well as fairness and transparency of the online plat-

form. At this time, **economy and society** are focused on making full use of the digital economy's growth potential. The Digital Single Market Strategy aims to maximise the potential resources for the prosperity of the European economy, in particular within the digital sphere, where all citizens of the European Union take full advantage of its benefits, namely by improving digital skills, which in turn are essential for an inclusive digital society (European Commission 2020a).

The Digital Single Market Strategy also aims to reduce market fragmentation, increase data flows and update the existing rules for the digital age. All efforts are aimed at improving consumer access through banning unreasonable geo-blocking, content portability, end of roaming and WiFi4EU. The framework market conditions were aimed at the new telecommunications code, the Audio-visual and Media Services Directive, an updated copyright regime and platform regulation. Actions aimed at digital skills and the digitisation of industry and the public sector, combined with the new Digital Europe programme, can also significantly contribute to the digitalisation of the economy. The implementation of the rules adopted in recent years is ongoing, and the implementation of new rules remains a priority for the EU (European Commission 2020b). *DigitalEurope* is a new EU funding programme aimed at providing digital technologies to businesses, citizens and public administrations in 2021–2027. The programme provides funding for projects in five key areas – i.e. supercomputers, Artificial Intelligence, cyber security, advanced digital skills and ensuring the widespread use of digital technologies in the economy and society. The programme is designed to bridge the gap between digital technology research and market deployment. This will benefit European citizens and businesses, especially SMEs. Investments under the Digital Europe Program support the dual objectives of the European Union – i.e. green transition and digital transformation – while strengthening the sustainability and digital sovereignty of the Union (European Commission 2023).

The DSM strategy has also contributed to digital transformation through a range of support mechanisms, such as Building a European Data Economy and the Code of Conduct on Countering Illegal Hate Speech on the Internet. It also includes various political groups and workshops. Examples of such are the European Observatory and the Blockchain Forum, as well as the various working groups on the configuration of 5G networks. Inquiries and reviews have also become an important part of the Digital Single Market. For example, it included e-commerce inquiries that touched on both border barriers and antitrust issues (EU4Digital n. d.). Finally, the ERC strategy has created a number of funds, such as the Centers for Digital Innovation and the Fund for Future and New Technologies.

Strategic initiatives and investments remain important on the Digital Single Market agenda. The need for these actions is seen at all levels, as Europe lags behind other leading regions in some areas of development and adoption of digital technologies, relating to both mainstream digital technologies and

new high-tech technologies impact. Significant differences remain within and between EU Member States, and fragmentation itself is an obstacle to the development and implementation at the scale of European digital solutions, which often require a large critical mass – data, users or connected nodes – to be viable.

Among strategic initiatives, several key areas of implementation can be distinguished. One of them is developing and scaling EU technology ecosystems to match the best in the world and to position Europe as a leader in key digital cutting-edge technologies around centres of excellence through collaboration between super-universities, public authorities, established industries and active start-ups. Another important area is the creation of a digital leadership tool for innovative procurement of digital technologies of European strategic importance, combining innovation funding and public procurement. Additionally, the EU aims to establish data platforms for strategic B2B sectors, for example, enabling pan-European exchange of health data (or similarly utilities or transport data) to improve health outcomes, research and drive innovation, while respecting citizens' privacy and trust.

In the framework of such initiatives a significant focus is also placed on paving the way for trusted artificial intelligence (AI) worldwide. This involves facilitating AI-based innovation to drive economic growth and social innovation, while ensuring transparency and positive social impact, which may include social measures to counter potential negative consequences. This would distinguish the European AI solution as ethical and reliable. Moreover, empowering cities and communities across Europe is a priority, achieved by promoting and ensuring the development and equal access to citizen-centric smart city technologies for better public and private services in transport, health, energy and social and community services.

To strengthen cybersecurity, the EU is raising its cybersecurity shield to protect EU citizens, businesses and member states from attacks on their data and data systems. This involves protecting end-to-end technology supply chains, including foreign technologies, and increasing strategic autonomy for key technologies. Another critical measure is enhancing citizens' control over their personal data, building on the General Data Protection Regulation to improve understanding, user-centricity, control and effective enforcement of citizens' data rights, and enabling innovation and new business models based on data portability.

Furthermore, digital solutions are being facilitated to address climate risk prevention by promoting the positive potential of digital technologies to reduce CO₂ emissions and resource use in other sectors, and to reduce the growing contribution of ICTs to CO₂ emissions and natural resource use (in particular rare metals) through infrastructure (e.g. data centres) and ICT devices.

Finally, the EU is committed to supporting lifelong learning for future work to enable the large-scale reskilling of citizens (especially populations at risk

of unemployment) and equip all citizens with the digital and cognitive skills needed to succeed as regards future work (European Commission 2020b).

It is worth exploring in more detail the key areas of the Roadmap 'Digital Compass for the EU's Digital Decade' – namely those of skills, infrastructure, business and governance.

The Commission defines a qualified in the digital sphere population and highly qualified digital specialists as the first, strategically important goal. As noted, this should be facilitated by the development of a highly effective digital education ecosystem, as well as an effective policy of promoting connections and attracting talented individuals from around the world (European Commission 2021a). Digital skills will be essential to strengthen Europe's collective societal resilience. Basic digital skills for all citizens and the ability to acquire new ones for the workforce comprise the prerequisite for active participation in the Digital Decade, as explained in the European Skills Agenda (Dang & Pheng 2014).

The next issue to be considered is a safe, efficient and sustainable digital infrastructure. As stated in the Digital Compass, Europe will only achieve digital leadership by building it on a sustainable digital infrastructure of connectivity, microelectronics and the ability to process big data, since they act as drivers of other technological developments and support the competitive advantage of the European industry (European Commission 2021a). As the decade progresses, households will increase their use of such network technologies, reflecting their growing needs for very high bandwidth connectivity. That is why the Commission has set 2030 as the target for all European households to have gigabit network coverage and for all settlements to be covered by 5G.

Digital transformation of business is one of the key goals as well. Its success will depend on the ability of businesses to rapidly and pervasively adopt new digital technologies, particularly in lagging industrial and service ecosystems. The commission sees the potential for digital transformation through five key business 'ecosystems' (European Commission 2020b) – namely, manufacturing, healthcare, construction, agriculture and mobility.

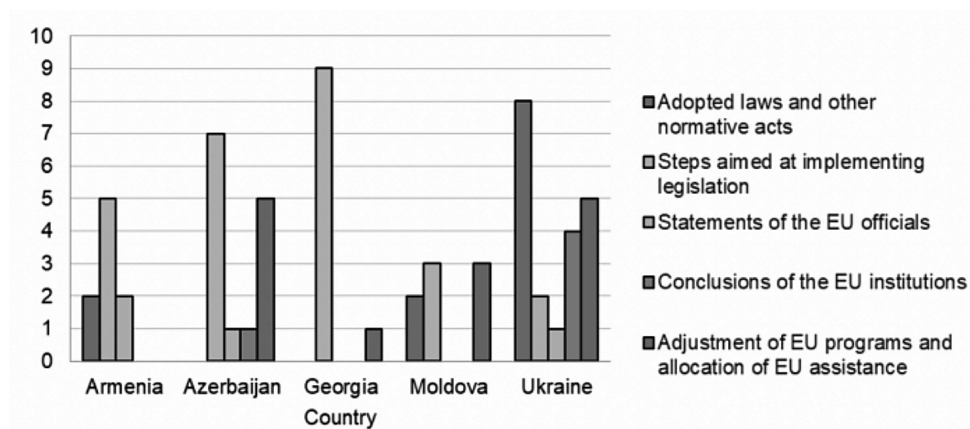
The EU will promote its 'people-centred' digital agenda on the global stage and promote alignment or convergence with EU norms and standards. Besides, the union will ensure the security and sustainability of its digital supply chains and provide global solutions (European Commission 2021a).

Assessment of the integration of EaP Countries' Digital Markets into the Digital Single Market

The European Union remains the main partner of EaP Countries in promoting digital transformation. This involves providing financial assistance for the implementation of reforms through various initiatives and providing access

to EU funding instruments, as well as promoting better legislation and digital innovation (see Figure 1).

Figure 1: EaP Countries' reforms and EU actions in 2022



Source: Koriavets 2023

The EU shows great interest in the development of Armenia's digital economy and infrastructure. In **Armenia**, the main attention is paid to the management of information systems, the implementation of digital solutions in the country's management system and the improvement of cyber security systems. European Union activities in **Azerbaijan**, by contrast, are mostly focused on telecommunications and the startup ecosystem. The digitalisation initiatives of the Republic of **Moldova** are primarily focused on providing rural areas and students in schools with digital infrastructure. The EU has also paid more attention to cyber security, particularly in the context of the high vulnerability caused by Russia's war against Ukraine. An important direction of the EU's digital policy in **Georgia** is towards cyber security and e-government. Georgia's e-government sector has reached an important milestone with the launch of the my.gov.ge platform, which provides online access to government services. In light of the tense war between Russia and Ukraine, the EU has recognised the need to respond quickly to cyber threats and has taken significant steps to help **Ukraine** combat potential Russian cyber attacks. The importance of the cyber security agenda is also reflected in the actions taken by the EU, such as the deployment of Cyber Rapid Response Teams and the provision of more than EUR 10 million in funding to support the strengthening of cyber security and the availability of public services (Koriavets 2023).

If we analyse the digital integration of the EaP countries through the prism of geo-dirigisme theory, it is important to understand the strategic regulatory influence the EU has on them, particularly through regulatory coercion and

financing mechanisms. For Ukraine, adaptation to EU digital legislation is important both within the framework of digital visa-free travel and for the ambitious goals of full membership. The EU's levers of influence on Ukraine remain investment projects for the development of information technology, financing for digital transformation in Ukraine, development of digital skills of Ukrainian specialists and, to a large extent, cybersecurity (Digital integration n.d.). As for Georgia and Moldova, the European Union remains the main investor in digital infrastructure, which creates a certain financial dependence on EU assistance. In addition, Armenia needs to receive active funding for digital projects from the EU, which would reduce Russian influence on its digital sphere. Azerbaijan's weak legal harmonisation with the EU reduces the opportunities for regulatory coercion by the Union, but financial mechanisms of influence remain in place. Meanwhile, the EU's influence on Belarus is rather insignificant given the existing sanctions against the state and the suspension of Belarus' participation in the Eastern Partnership programme.

The EaP countries and the EU are also actively developing cooperation in the field of e-business, which contributes to their economic growth, competitiveness, transparency of economic operations and technological progress. In this context, the priority areas of cooperation are the development of the e-economy, cybersecurity of e-commerce operations, consumer data protection, legal framework for e-commerce, development of online trading platforms, digitalisation of SMEs, implementation of the payment system and improvement of the digital system. The positive effects of EU-EaP cooperation in the field of e-business include economic integration between the EU and EaP countries. In addition, the cooperation contributes to an increase in the GDP of the EaP countries, the creation of a common e-business market, the development of a free economy, digital transformation, and an increase in export and import operations between the EU and the EaP countries. An important result is also the attraction of investments to the EaP countries and the development of small and medium-sized enterprises. However, cooperation also has negative consequences, including problems with national producers who do not have the necessary digital technologies, as well as weak competitiveness of national producers compared to European ones (Tsebenko et al. 2023).

The direct integration of the digital markets of the Eastern Partnership countries involves approximation of their national legislation in the field of digital technologies and the reforms within the key elements of digital transformation in the European Union; for this aim the 'EU4Digital' Initiative was established to become the driver of digital transformations in the Eastern Partnership countries. This is the Initiative to harmonise the digital markets of the Eastern Partnership countries with the EU's Digital Single Market, launched by the European Commission in 2016. It aims to spread the benefits of the DSM to the Eastern Partnership countries, focusing EU assistance on developing the potential of

digital economies and society to ensure economic growth, to create more jobs, to improve the level and quality of life of people, and to provide assistance to enterprises and businesses. Through the EU4Digital, the EU supports Eastern Partnership countries in reducing roaming tariffs, promoting the development and deployment of high-speed broadband for the economy and expanding e-services, harmonising digital public institutions in various areas such as logistics and health, as well as strengthening cyber security and the growth of digital skills (Troitiño 2022).

The 'EU4Digital' initiative brings together a range of actions and programmes within the European Union, including the following:

- **EU4Digital Networks**, which unifies representatives of the EU member states and the countries of the Eastern region for joint work in certain areas;
- **The EU4Digital programme (2019–2022)**, which promotes key areas of the digital economy and society;
- **Digital 'broadband' strategies (2018–2020)**, which supported the Eastern Partnership countries in implementing strategies in the field of broadband communication at the national level;
- **The 'cyber security – East' project**, aimed at increasing public trust in digital services and strengthen cybersecurity;
- **The 'EaPConnect' project**, focused on expanding network infrastructure to connect research and educational groups from the EU member states and Eastern neighbouring countries.

The long-term priority of the Initiative is the creation and further development of the digital community, and the key is an undisruptive digital transformation. This is due to the fact that sustainable digital transformation occupies an important place in the agenda of the EU's external actions. Also, the latter was identified as one of the five priorities to stimulate sustainable growth for both the EU and the Eastern partner countries in the Joint Communication on the Eastern Partnership policy after 2020, issued in March 2020 by the European Commission and the EU High Representative with issues of foreign affairs and security policy, as well as confirmed in the priorities of the Eastern Partnership after 2020. The agenda is underpinned by an economic and investment plan of EUR 2.3 billion in grants, blending and guarantees, with the potential to mobilise up to EUR 17 billion of public and private investment. The latest document sets out ten main EU targets for the Eastern Partnership, one of which is for at least 80% of households to have access to affordable high-speed internet by 2025 (EU Neighbours East 2019).

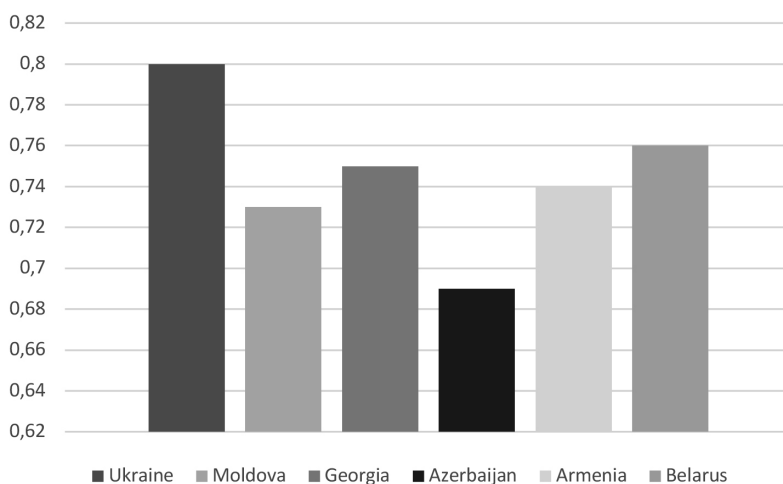
In 2021–2022, the political importance of the Initiative was considered and key areas were identified. These included developing framework rules (e.g. eCommerce, eGovernance) to compare with EU and world practices, establish-

ing the practice of reuse and EU decision-making (eDelivery, eSignature, SEED), mobilising stakeholders for cooperation, engaging international partners to create positive synergy and laying the foundations for large-scale digital solutions and projects.

In general, 'EU4Digital' is an initiative to harmonise the digital markets of the countries participating in the Eastern Partnership to the EU's Single Digital Market, the key priority of which is an undisturbed digital transformation, in particular through the convergence of national legislation and reforms in key areas of digitalisation. The initiative covers six key cooperation networks in the region: rules of telecommunication systems and networks, trust and security, electronic commerce (trade), innovations in the field of information and communication technologies, electronic health care system and digital skills. In recent years, within the framework of the EU4Digital Initiative, significant results have been achieved in the Eastern Partnership countries, in particular: the Model Law on Electronic Communications based on the EU regulatory framework has been agreed; the final version of the Regional Spectrum Agreement (RSA) was reached; Armenia, Georgia and Ukraine are selected to participate in the digital signature expansion pilot; consulting activities on the implementation of eDelivery have been introduced; collected data to assess the maturity of e-government; a check was carried out using the System Electronic Data Exchange (SEED) in the customs sphere; a national virtual warehouse was created to support small and medium-sized enterprises in the countries of the South Caucasus; launch of special platforms 'EU4Digital Smart Industry Community Space' in the field of ICT and eHealth in the field of health care, etc.

It is appropriate to consider the E-Government Development Index (EGDI), which represents the state of e-government development in UN member states. Along with assessing country patterns of website development, the EGDI includes access characteristics such as infrastructure and education levels to reflect how a country uses information technology to promote access and engage its citizens. The EGDI index assesses three important dimensions of e-government: online service provision, telecommunication connectivity and human resources. It is important to note that the Index divides countries into different groups according to the level of e-government development – i.e. very high EGDI group, high EGDI group, medium EGDI group, low EGDI group. According to the study for 2022, the very high EGDI group includes such Eastern Partnership countries as Ukraine and Georgia, the high EGDI group includes the Republic of Moldova, Belarus, Armenia and Azerbaijan (Moncada 2017). In the e-government development rating, out of 193 countries, Ukraine ranks 46th, Belarus 58th, Georgia 60th, Armenia 64th, the Republic of Moldova 72nd and Azerbaijan 83rd (United Nations E-Government Survey 2022). The results of the analysis are shown in Figure 2.

Figure 2: Positions of the participating countries of the 'Eastern Partnership' in the e-Government Development Rating (EGDI) (2022)



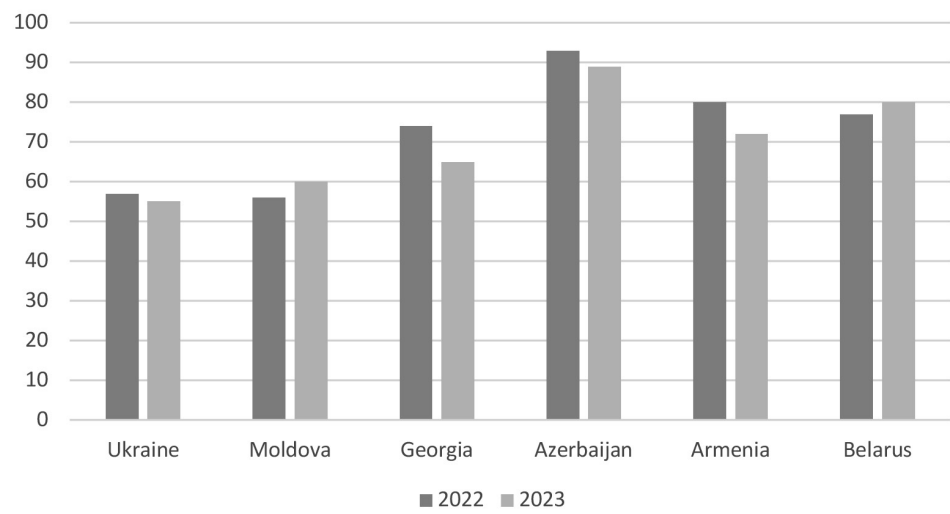
Source: Authors

One of the studies based on a comparative analysis of the dynamics of the EaP countries' ranking according to the EGDI index in 2003–2020 allows us to trace the trend of significant progress in the development of e-government. Thus, it was found that the most important component in the development of the EaP countries is human capital. At the same time, progress varies in the development of the Online Services and Telecommunication Infrastructure components. However, the overall state of e-governance improvement in all EaP countries is virtually at the same level (Tsebenko et al. 2022b).

The Global Innovation Index (GII) reveals the world's most innovative economies by assessing the innovation performance of approximately 132 economies, highlighting innovation strengths and weaknesses among different economic groups. So, in the specified rating Moldova is in the 60th position, Ukraine is 55th, Georgia is 65th, the Republic of Belarus is 80th, Armenia is 72nd and Azerbaijan is 89th (Dutta et al. 2023). For comparison, in 2022, the Republic of Moldova took 56th place, which means that in 2023 it fell by four positions. On the other hand, Ukraine, which in 2022 was in 57th place, despite all its challenges was able to rise in the ranking in 2023. It is obvious that in 2023 some states managed to improve their positions compared to 2022 (Georgia – 74th, Armenia – 80th and Azerbaijan – 93rd). Belarus, which in 2022 was in 77th place in the rating, showed a negative trend and fell three positions (Dutta et al. 2022) (see Figure 3).

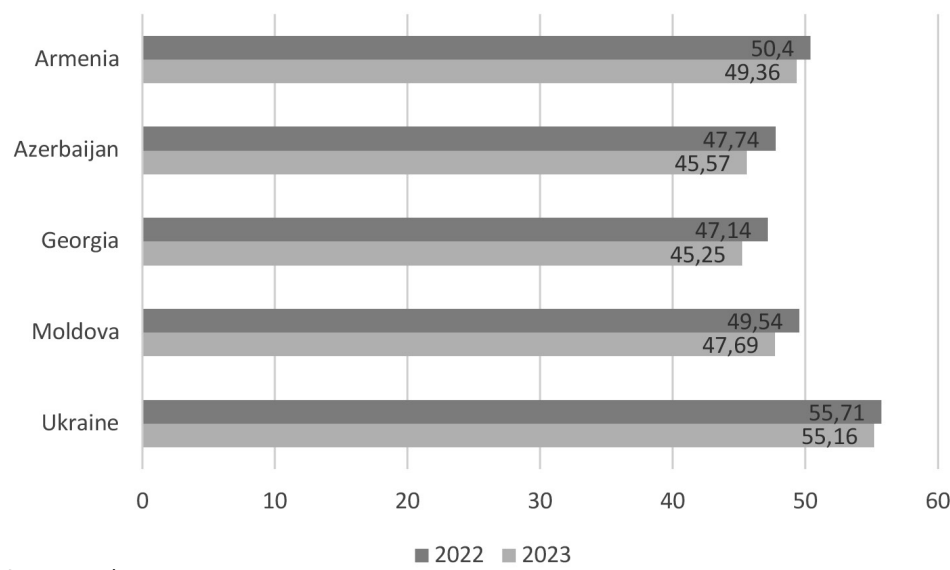
It is appropriate to analyse the data provided by the Network Readiness Index (NRI). The Network Readiness Index 2023 ranks a total of 134 economies that col-

Figure 3: Positions of the participating countries of the ‘Eastern Partnership’ in the Global Innovation Index (GII) (2022–2023)



Source: Authors

Figure 4: The Network Readiness Index 2022–2023



Source: Authors

lectively account for 95 percent of global gross domestic product (GDP). In 2023, Ukraine took 43rd place, thereby improving its results and rising in the overall ranking. For comparison, in 2022 it ranked 50th. Moldova in 2023 remained at the same level as in 2022 (67th place). In 2022, Azerbaijan ranked 74th and Georgia

ranked 75th, but in 2023, Azerbaijan dropped one position to 75th and Georgia ranked 78th. In 2023, Armenia managed to rise in the index by one position from the year before and occupy 63rd place (Dutta & Lanvin 2022, 2023) (see Figure 4).

It is worth considering the degree of digitalisation of the Eastern Partnership countries using the Digital Economy and Society Index (DESI).

The Digital Economy and Society Index (DESI) tracks Europe's overall digital productivity and monitors EU countries' progress in digital competitiveness within five components – i.e. connectivity (fixed, mobile broadband penetration and coverage), human capital (basic and advanced digital skills), use of the Internet (citizens' use of Internet services and online transactions), integration of digital technologies (digitalisation of business and e-commerce) and digital public services (e-government) (European Commission 2022). Since DESI does not monitor the indicators of the Eastern Partnership countries, analysing similar indicators can provide a basic understanding of their digitalisation level and their progress towards integration into the EU DSM.

In the context of digital development, it is worth analysing the level of Internet access in the Eastern Partnership countries. The current data on coverage in Ukraine, especially fixed broadband, is considered highly inaccurate. According to Ookla, there is no 5G coverage in the country, though the equipment is installed and being tested in the largest cities (Speedtest 2022b). In 2021, according to Global Logic, 85% of the Ukrainian population had access to the Internet; and according to the World Bank 79% were Internet users and 71% of the population used digital services (The World Bank Group 2016). Despite 60% of Moldova's population living in rural areas, around 90% of the country has access to ultra-fast gigabit Internet (Speedtest 2022b). As of January 2022, there are 3.07 million Internet users in Moldova, which is about 76% of the population, 62% of whom are users of Internet services (Belan 2020). In Georgia, internet and mobile connectivity is uniform and reaches more than 70% of the country's population, a relatively high number given the hard-to-reach geographical regions (Speedtest 2022b). In 2020, 23.1% of the users made online transactions and ordered online services (Hronová 2022). In Armenia, 96% of households have at least basic access to the Internet and there is almost no gap in the Internet use between urban and rural communities. In addition, 99.61% of the population has access to the 3G-based network (Speedtest 2022b). In 2021, there were 2.02 million internet users in Armenia, who mostly used it to access communication and media services, and 8% of whom were involved in e-commerce (The World Bank Group 2016). As for Azerbaijan, the quality of the broadband services is low, i.e. the number of high-speed connections is consistently lower than 10% of all connections present in the country. As fixed by the Economist Intelligence Unit 2021 Inclusive Internet Index, about 78% of households have access to the Internet (Speedtest 2022b). Accordingly, 81.1% of the population are Internet users, using the network for online services, online

banking and online transactions (Lloyds banktrade 2021). In Belarus, more than 3.2 million people use broadband Internet access. The second generation (2G) mobile communication services are available in 99.3% of the country's territory, and the third generation (3G) in 98.4% of it (Speedtest 2022b). Existing data proves that online sales in Belarus increased by 42% and reached almost USD 1 billion, which makes 4.5% of the total retail turnover (Zooinform 2021).

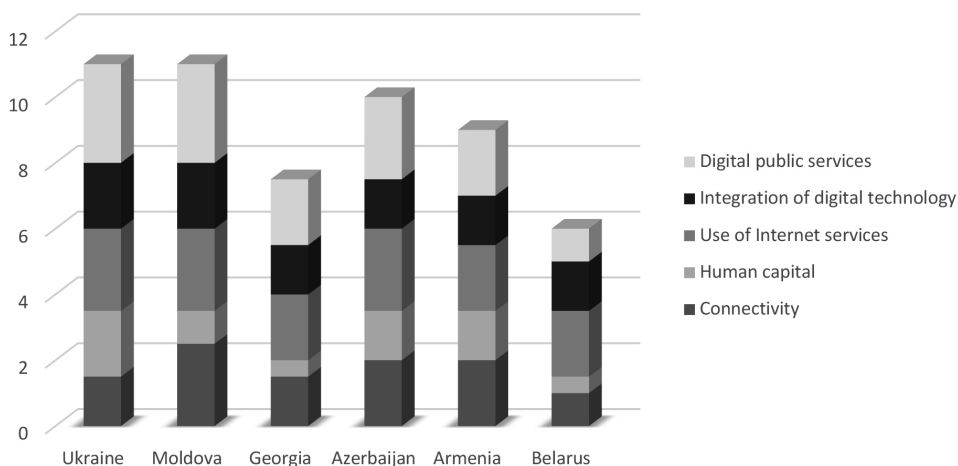
As stated in the Speedtest Global Index 2022, in terms of mobile Internet speed Ukraine ranks 79th, Moldova 59th, Georgia 68th, Armenia 77th, Azerbaijan 61st and Belarus ranks 132nd. At this time, in terms of fixed broadband connection speed, Ukraine ranks 63rd, Moldova 24th, Georgia 115th, Armenia 99th, Azerbaijan 115th and Belarus ranks 73rd (Speedtest 2022a).

It is important to develop digital skills among citizens. In Ukraine, this is one of the strategic priorities of the Ministry of Digital Transformation. The share of the Ukrainians whose digital skills are below the basic level mark decreased by 5.2% (1.42 million people) and as of 2022 was 47.8% (which is less than in 2021); and those with no digital skills ('No skills') decreased by 4%, or by 1.09 million people (International Telecommunication Union (ITU) 2021). The opportunities for the citizens of Moldova to develop their technical capabilities are expanding, but they still do not meet the level of demand (United Nations Development Programme 2019: 8). In Georgia, the indicators of internet and digital skills among the population are rather low. As the research for 2020 shows, 26% of internet users have an average level of skills and only 12% are considered proficient (Hronová 2022). The population of Armenia has mediocre digital and internet skills, with fewer than 30% of citizens demonstrating basic knowledge (European Training Foundation 2020). Azerbaijan's authorities are trying to promote the development of digital skills among citizens – that is, about 62% of the population believe that they have developed their digital skills and knowledge to a basic level, and about 53% of the population can be considered digitally literate (Yoon et al. 2019). Belarus was at the middle stage of digital readiness of society as of 2019 (Cisco 2019), which was indicated by an acceleration of the citizens' digital skills.

Ukraine pays due attention to the integration of digital technologies in business and e-commerce and, as shown by 2019 data, the technological landscape 4.0 in Ukraine included 62 companies, which are distributed in 16 segments +1 by system integration, which is considered the most numerous (21 companies) (The World Bank Group 2016: 2). Furthermore, Ukraine is the 65th largest e-commerce market with a revenue of USD 1.1 billion in 2021 according to Statista Digital Market Outlook (Statista 2022). As for Moldova, small and medium-sized businesses are the backbone of the country's economy; however, only 17% of them have integrated digital technologies into their work (United Nations Development Programme 2019). The e-commerce involvement in Georgia is very low (1.1% of retail sales), which is far below the European average of 12% (Galt & Taggart 2018).

Considering digital public services, it should be noted that the integral element of digital public services in Ukraine is the online platform and mobile application ‘Diia’ (9.5 million active users in November 2021) (International Telecommunication Union (ITU) 2021). Several e-government tools function in Moldova, such as the government data portal ‘date.gov.md’, a single window for all public services ‘servicii.gov.md’, digital mobile signature, MCloud, ‘MPass’, ‘MPay’, ‘MSign’, ‘eVisa’ and the government interaction platform ‘MConnect’ (United Nations Development Programme 2019: 10–11). The Unified Electronic Services Portal (MY.GOV.GE) in Georgia is a key element of digital public services in the country, which, as of 2020, provided information on more than 600 government services (Ministry of Economy and Sustainable Development of Georgia 2023). The provision of digital public services in Armenia is only developing. The country has a website that combines e-government tools and databases of state bodies (Electronic Government 2023). In Azerbaijan, ASAN, the electronic government portal organised on the principle of ‘single window’, provides 315 services across 11 government institutions, as well as from private companies and enterprises. It is accessible through 15 ASAN centres throughout the country and it is managed by ASAN xidmət, which is convenient for the citizens (Yoon et al. 2019: 20). Available information on the functioning of the e-government in Belarus is spotty, but there is an organisation called the National Center for Electronic Services (NCES), which is subordinate to the Operational Analytical Center under the President of the Republic of Belarus (see Figure 5).

Figure 5: The level of digital integration of the Eastern Partnership countries according to the key indicators of the DESI index



Source: Authors

The analysis of the Eastern Partnership countries according to the indicators of the digital economy and society index (DESI) demonstrated their level of digital integration in the key areas on the way to the EU DSM; the results are also highlighted in the author's diagram. It is important to understand that the high performance of the EaP countries and their progress in digital development is largely due to the EU's influence on these countries. Adaptation to EU norms, compliance with European standards, funding and investments from the EU are direct factors in the development of digital markets in the EaP countries with the prospect of integration into the Digital Single Market. The motivations of the state for digital transformation also play a significant role, as they directly affect the amount of effort the state will make in this process.

The challenges and prospects of the integration of digital markets of the Eastern Partnership countries participating in the EU initiative into the EU Digital Single Market

Despite the considerable and tangible achievements in their digital transformation, each of the countries of the Eastern Initiative – Ukraine, the Republic of Moldova, Georgia, the Republic of Belarus, Armenia and Azerbaijan – demonstrates unique problems and gaps that prevent the rapprochement; their study will help to clarify the key directions of development and prospects integration of the digital market of this or that country into the EU DSM.

Eastern Partnership countries should consider certain aspects that hinder digital harmonisation with the EU for transposition into national law; in particular, the 'bans and restrictions' for the import of certain goods into the national territory, as products sold online and sent from a third country to EU, are placed on the EU market, and therefore these products must comply with all EU product safety regulations (European Commission 2021b). In addition, the aspects of e-commerce standardisation are challenging as well; More precisely this refers to the lack of a 'Trustmark' for e-commerce websites. This refers to the national e-commerce certification scheme Trustmark, which certifies that an e-commerce company based on the national territory has undertaken commitment to work in accordance with the European Code of Conduct, guaranteeing ethical standards in the digital market (European Society of Occupational Safety & Health 2023). Parcel delivery is one more gap in cross-border e-commerce in the Eastern Partnership countries compared to the EU, as due to the limited size of the market, global private operators try to maintain high volumes of e-commerce, which leads to higher tariffs for consumers. The delivery terms are several days slower than in the EU, where delivery within 48 hours is common (Organisation for Economic Co-operation and Development (OECD) 2021).

In Belarus, there is a general lack of experience and information on best practices for developing digital skills, and there is no single body to manage and

regulate the ICT sector as well. In addition, in some Eastern partners of the EU (Georgia, Moldova), there is a fear and reluctance to use digital technologies among the population, caused by the low level of digital literacy, which leads to a slowdown in the implementation of information technologies, lower competitiveness, higher costs and a decrease in economic growth in general. This is all despite the legislation on e-commerce, electronic signature and ICT training in schools (Georgia) (Hronová 2022). In Moldova, while there is a clear understanding that a strong digital economy is vital for innovation, growth, jobs and competitiveness, there is no clear long-term vision and policy on how digital skills can be developed at the national level. However, there is potential due to the new National Strategy for the Development of the Information Society 'Digital Moldova 2020' (European Training Foundation 2020).

Despite the good performance of the fixed broadband in the EaP countries and the improvement of the Internet speed in recent years, the current networks in the EaP countries are not yet able to provide gigabit speeds, which is an important requirement for EU DSM integration (Organisation for Economic Co-operation and Development (OECD) 2021).

Ukraine is the most active country in this regard, especially in the areas of cyber security, government electronics, communications, trust and identity. Ukraine has the largest percentage of laws and regulations regarding the implementation of the EU digital strategy. In response to Ukraine's requests, the EU included the country's institutions in various joint projects. Granting Ukraine the status of a candidate for the EU has a significant impact on this (Koriavets 2023).

It is important to note that in the conditions of the war, the digital integration of Ukraine into the DSM of the EU has not changed its nature; notwithstanding the circumstances, it is accelerating. This is most evident in the fact that on 23 November 2022, an experimental project was launched on the mutual recognition of qualified electronic signatures of Ukraine and the EU with the proper protection of personal data, which indicates significant progress in the development of trust services according to EU standards. Furthermore, the Ministry of Digital Transformation of Ukraine is actively conducting a dialogue with European partners regarding the development of technical solutions and the clarification of legal issues related to the recognition by the EU member states of the electronic documents created by means of the Unified State Web Portal of Electronic Services 'Diia' using the means of unified and state registers of Ukraine. Besides, active cooperation for Ukraine to be included in the EU trust list for the recognition of Ukrainian documents in the 'Diia' application is being carried out (Official Website of the Ministry and Committee 2023).

To summarise, there are several potential scenarios for the development of the European Digital Agenda in the EaP countries. In particular, the first

scenario assumes that all EaP countries will implement a significant number of digitalisation reforms, approximating European standards as much as possible, which will lead to the creation of a single digital market of the EU and EaP countries. However, this scenario is unlikely in the short and long term, as there are many threats to the further format of cooperation of some states within the Initiative – namely Belarus. The second scenario involves a scenario in which the EaP countries will be divided into two blocs: the Associated Trio countries (Ukraine, Georgia, and the Republic of Moldova), which will be the most ambitious to join the EU and therefore will make the most efforts to implement the European digital course; and Armenia, Azerbaijan and Belarus, which will not be able to achieve full harmonisation with the European digital course. This scenario is most likely in the medium term. The next scenario is possible in the short term (due to the Russo-Ukrainian war) and unlikely in the long term. This scenario involves a difficult geopolitical situation in the region, in which EU reforms in the target countries will slow down. Another scenario, though unlikely, is that all EaP countries would reject the European digital agenda (Tsebenko et al. 2022a).

Conclusions

Thus, despite the fact that digitalisation creates huge opportunities for economic and social development in the countries of the Eastern Partnership, not all of the participants pay due attention to it. However, Ukraine, Georgia and the Republic of Moldova show interest in cooperation in the Single Digital Market and are making efforts for further integration.

For Ukraine, integration into the EU Digital Market is not only about being globally competitive in terms of technology, it is also necessary in connection with the EU accession negotiations, defining clear sections and a cluster – Competitiveness and Inclusive Growth. Ukraine widely uses various digital services. An integral element of digital public services in Ukraine is the online platform and mobile application ‘Diya’, which has already become a well-known national e-government brand. The launch of the digital state platform ‘Diya’ united all institutions into one effective tool providing public services online. In addition, an electronic health care system (eHealth) and an information system for patients and storage of medical data (HELSI) are actively functioning in Ukraine. The Emalyatko service has been created for parents of newborn children, thanks to which, by submitting just one online application, you can easily register the birth of a child, as well as receive up to ten state services that are necessary for the birth of a baby. The Paperless service, which took on the function of ensuring document circulation in electronic form, became important and convenient for companies and entrepreneurs. Another component of the system of electronic exchange of documents between Ukrainian and European companies is

eSignature. The goal is to introduce a digital signature standard in Ukraine and guarantee its authenticity for EU companies and institutions.

The Republic of Moldova is making great efforts on its way to EU integration, including the implementation of internal digital transformation. Moldova's Digital Transformation Strategy aims to build a digital society and a competitive information and communication technology sector, develop a sustainable digital economy and digitise public services. It is important that these steps in the digital sphere not only contribute to the economic development of the state or the harmonisation of digital markets (Moldova-EU), but also bring Moldova politically closer to the EU.

Georgia is a country that, despite political instability, has made significant progress in the context of digitalisation, especially thanks to the EU's support for digital reforms. To a greater extent, this progress can be seen in the e-governance system. However, the process of gaining full EU membership, which has long been a motivation for Georgia in its reforms (the country even received the status of EU candidate), is now suspended, as is the EU's financial support.

If we analyse Armenia's success in the digital sphere, the main emphasis is on the development of information systems, integration of digital technologies into public administration and improving cybersecurity. It is worth noting that Russian influence has long weakened Armenia's motivation to join the EU, which suggests that Armenia's motivations for integrating into the digital market were economic and a desire to keep up with technological trends and developments in the global market. However, with Armenia's intensified intentions to become an EU member, this motivation may now become geopolitical.

Azerbaijan is another country where the economic motive and the desire to follow global digital trends have potentially driven digital transformation. Currently, Azerbaijan is actively implementing standardisation and accelerating the development of the digital sphere, and EU funding plays an important role in the implementation of digital projects.

The Republic of Belarus's suspension of its participation in the Eastern Partnership has 'paused' programmes involving Belarusian government agencies and state-owned enterprises. In addition, EU sanctions against Belarus are in place, which is unfavourable for the country's economic development and creates the need to finance digital transformation internally or with the support of other partners.

However, the countries still need to take a number of complex measures in order to achieve their goals and get all the benefits of the Single Digital Market of the European Union, as there are the following possible development trajectories of the integration of the Eastern Partnership countries into the Single Digital Market of the EU: the creation of the Digital Single Market for the EU and EaP countries is unlikely in the near future; there may be a slowdown in the integration of the Eastern Partnership countries into the EU DSM due to

the regional crisis caused by Russia's war against Ukraine; the Association Trio is likely to make more progress in digital transformation towards the EU DSM than the rest of the initiative countries; it is doubtful that all Eastern Partnership countries will cancel the European digital course; and it is likely that the EU will finally stop cooperation with Belarus within the framework of the digital initiative.

It remains obvious that each of the states participating in the Eastern Partnership programme differs from each other primarily in terms of the political situation. Also, the region is saturated with additional geopolitical challenges, and this affects the rapid and high-quality implementation of all digital transformation reforms proposed by the European Union. However, the EU understands this situation and shows patience in the form of various support mechanisms, such as funds, programmes and projects. Their implementation and application depend on the urgent needs of the state and, most importantly, on its political will.

As practice shows, the Eastern Partnership countries pay a lot of attention to the issue of digital transformation, despite the internal and external challenges facing them. This can be explained by the fact that they see it as a key component that provides additional opportunities for reform, recovery and digital resilience. After the start of Russia's illegal and unprovoked war against Ukraine, these issues became more relevant than ever and acquired new meanings, which became a direct incentive for the rapid implementation of the main components of digitalisation.

In this context, EU4Digital is one of the powerful tools that coordinates and facilitates the creation of a common framework aimed at spreading the benefits of the Digital Single Market in the Eastern Partnership countries. The key problem is that the level of political commitments and the intensity of domestic activities on the way to the digital transformation of states are out of proportion to their achievements. Therefore, within the framework of this initiative, each partner state, with the support of the relevant institutions of the European Union, should pay more attention to additional instruments in order to avoid future gaps in indicators.

The European Union faces significant challenges in implementing its foreign policy towards the EaP countries: its 'transformative power' is ineffective for Azerbaijan and Armenia, which have little motivation for membership, and its normative leverage does not guarantee success in interacting with reforms in Ukraine, Georgia and Moldova. Given the different motivations pursued by the EaP countries in the process of integration into the Digital Single Market, the EU needs to combine different approaches in its policies, regarding both 'normative power' and 'transformative power', and take advantage of the 'Brussels effect'. This will allow the European Union to have effective instruments of influence in its arsenal that will simultaneously contribute to the sustainable

development of Europe and improve the EU's interaction with international actors at various levels.

Each of the states managed to achieve certain results that brought it closer to the common digital market of the European Union. However, the region is not marked by a high level of stability and the index indicators highlight fluctuations in the achievements of the participating states. Undoubtedly, all parties should focus as much as possible on the implementation of the set goals and contribute to the introduction of legal norms into domestic legislation that would speed up full integration into the EU's Single Digital Market.

References

- Belan, D. (2020): Digitalization of Public Services in Moldova in the Covid-19 Era. *United Nations Development Programme in Moldova*, <accessed online: https://moldova.un.org/sites/default/files/2020-09/Public%20Services%20in%20Moldova%20in%20COVID%20era_revised_final.pdf>.
- Bradford, A. (2020). *The Brussels effect: how the European Union rules the world*. New York: Oxford University Press.
- Cisco (2019): Cisco Global Digital Readiness Index 2019. *Cisco Public*, <accessed online: https://www.cisco.com/c/dam/en_us/about/csr/reports/global-digital-readiness-index.pdf>.
- Dang, G. & Pheng, L. S. (2014): Theories of Economic Development. In: *Infrastructure Investments in Developing Economies*. Singapore: Springer, 11–26, 19 October, <accessed online: https://doi.org/10.1007/978-981-287-248-7_2>.
- Der (europäische) Föderalist (2023): The European Policy Quartet: From 'normative power Europe' to 'neo-idealism' – what's the role of values in EU foreign policy today? *Der (europäische) Föderalist*, <accessed online: <https://www.foederalist.eu/2023/04/european-policy-quartet-values-foreign-policy.html>>.
- Dimitrova, A., Boroda, M., Chulitskaya, T., Berbeca, V. & Parvan, T. (2016): Soft, Normative or Transformative Power: What Do the EU's Communications with Eastern Partners Reveal About Its Influence? *EU-STRAT Working Paper 1*, October, <accessed online: https://www.researchgate.net/publication/317253256_Soft_normative_or_transformative_power_What_do_EU's_communications_with_Eastern_partners_reveal_about_its_influence>.
- Dutta, S. & Lanvin, B. (2022): *The Network Readiness Index 2022 – Stepping into the New Digital Era. How and why Digital Natives will Change the World?* Washington: Portulans Institute, <accessed online: https://ivpk.lrv.lt/uploads/ivpk/documents/files/nri_2022.pdf>.
- Dutta, S. & Lanvin, B. (2023): *The Network Readiness Index 2023 – Trust in a Network Society: A crisis of the digital age?* Washington: Portulans Institute, <accessed online: https://download.networkreadinessindex.org/reports/nri_2023.pdf>.
- Dutta, S., Lanvin, B., Lorena, R. L. & Wunsch-Vincent, S. (2022): *Global Innovation Index 2022 – What is the Future of Innovation-Driven Growth?* Geneva: WIPO, <accessed online: <https://>>

- www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2022-en-main-report-global-innovation-index-2022-15th-edition.pdf>.
- Dutta, S., Lanvin, B., Lorena, R. L. & Wunsch-Vincent, S. (2023): *Global Innovation Index 2023: Innovation in the Face of Uncertainty*. Geneva: WIPO, <accessed online: <https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf>>.
- Edler, J., Blind, K., Kroll, H. & Schubert, T. (2023): Technology Sovereignty as an Emerging Frame for Innovation Policy. Defining Rationales, Ends and Means. *Research Policy*, 52(6), July, <accessed online: <https://www.sciencedirect.com/science/article/pii/S004873323000495>>.
- Electronic Government of the Republic of Armenia (2023): Electronic Government of the Republic of Armenia. *Electronic Government*, <accessed online: <https://www.e-gov.am/en/>>.
- EU Neighbours East (2019): Harmonising digital markets in the Eastern Partnership. *EU Neighbours East*, <accessed online: <https://euneighbourseast.eu/news/publications/harmonising-digital-markets-in-the-eastern-partnership/>>.
- EU & Me (2019): What's on the EU's Agenda? *EU & Me*, <accessed online: https://op.europa.eu/webpub/com/eu-and-me/en/WHATS_ON_THE_EUs_AGENDA.html>.
- EU4Digital (n.d.): EU Digital Strategy. *EU4Digital*, <accessed online: <https://eufordigital.eu/discover-eu/eu-digital-strategy/>>.
- European Commission (2020a): Shaping Europe's digital future. *European Commission*, <accessed online: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/shaping-europes-digital-future_en>.
- European Commission (2020b): Shaping the Digital Transformation in Europe. *European Commission*, <accessed online: <https://digital-strategy.ec.europa.eu/en/library/shaping-digital-transformation-europe>>.
- European Commission (2021a): 2030 Digital Compass: the European way for the Digital Decade: Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee of The Regions. *European Commission*, <accessed online: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>>.
- European Commission (2021b): ECommerce Report. Recommendations Proposed for ECommerce Environment Harmonisation in the EaP Countries: Republic of Armenia. *European Commission*, January, <accessed online: <https://eufordigital.eu/library/ecommerce-report-recommendations-proposed-for-ecommerce-environment-harmonisation-in-the-eap-countries-republic-of-armenia/>>.
- European Commission (2022): Digital Economy and Society Index (DESI). *European Commission*, <accessed online: <https://digital-strategy.ec.europa.eu/en/policies/desi>>.
- European Commission (2023): European Commission Official Website. *European Commission*, <accessed online: https://ec.europa.eu/info/index_en>.
- European Economic and Social Committee (2019): Digitalisation challenges for Europe. *European Economic and Social Committee*, <accessed online: <https://www.eesc.europa.eu/sites/default/files/files/qe-01-19-295-en-n.pdf>>.

- European Society of Occupational Safety & Health (2023): Kodeks povedinky uchasnykiv Yevropeiskoho spivtovarystva z okhorony pratsi YeSOP [Code of Conduct of the European Society of Occupational Safety & Health ESOSH]. *European Society of Occupational Safety & Health*, <accessed online: <https://www.esosh.net/join/codex>>.
- European Training Foundation (2021): Digital Skills and Online Learning in Armenia. *European Training Foundation*, <accessed online: https://www.etf.europa.eu/sites/default/files/2021-03/digital_factsheet_armenia.pdf>.
- EU-UA (n.d.): Digital integration. *EU-UA*, <accessed online: <https://eu-ua.kmu.gov.ua/en/partnership/digital/>>.
- Galt & Taggart (2018): E-commerce in Georgia. *Galt & Taggart*, <accessed online: <https://www.galtandtaggart.com/en/reports/research-reports/e-commerce-georgia>>.
- Gartner (n.d.): Digitization. *Gartner Glossary of Information Technology*, <accessed online: <https://www.gartner.com/en/information-technology/glossary/digitization>>.
- Gobble, M.-A. M. (2018): Digital Strategy and Digital Transformation. *Research-Technology Management*, 61(5), 66–71.
- Hronová, T. (2022): Teaching Digital Skills to Young People in Georgia. *People in need*, 18 March, <accessed online: <https://www.peopleinneed.net/teaching-digital-skills-to-young-people-in-georgia-8668gp>>.
- Koriavets, M. (2023): Resilient digital transformation in the Eastern Partnership region: State of play in 2022 and recommendations. *Foreign Policy Council 'Ukrainian Prism'*, 24 May, <accessed online: <https://prismua.org/en/english-resilient-digital-transformation-in-the-eastern-partnership-region-state-of-play-in-2022-and-recommendations/>>.
- Lilkov, D. (2023): Technological sovereignty? Delivering a complete European digital single market. *Sage Journals*, 22(2), <accessed online: <https://journals.sagepub.com/doi/full/10.1177/17816858231204745>>.
- Lloyds Banktrade (2021): E-commerce in Azerbaijan. *Lloyds banktrade*, <accessed online: <https://www.lloydsbanktrade.com/en/market-potential/azerbaijan/ecommerce>>.
- Małkowska, A., Urbaniec, M. & Kosała, M. (2021): The impact of digital transformation on European countries: insights from a comparative analysis. *Quarterly Journal of Economics and Economic Policy*, 16(2), 325–355.
- Manners, I. (2009): The Concept of Normative Power in World Politics. *DIIS Brief*, <accessed online: https://pure.diis.dk/ws/files/68745/B09_maj_Concept_Normative_Power_World_Politics.pdf>.
- Ministry of Economy and Sustainable Development of Georgia Official Website (2023): Communications, Information and Modern Technologies. *Ministry of Economy and Sustainable Development of Georgia*, <accessed online: <http://www.economy.ge/?page=ecopolitic&s=25&lang=en>>.
- Moncada, R. (2017): The European Digital Single Market. *Eyes on Europe*, 16 October, <accessed online: <https://www.eyes-on-europe.eu/the-european-digital-single-market/>>.
- Nanaeva, T. (2021): Digital Skills Development Ukraine. Good Practice Case Study. *Ministry of Digital Transformation of Ukraine – International Telecommunication Union (ITU)*,

- <accessed online: <https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Documents/Publications/2021/Digital%20Skills%20Development%20%E2%80%93%20Ukraine%20%E2%80%93%20Good%20practice%20case%20study.pdf>>.
- OECD (2021): Beyond COVID-19: Advancing Digital Business Transformation in the Eastern Partner Countries. *Organisation for Economic Co-operation and Development (OECD)*, <accessed online: <https://www.oecd.org/eurasia/digitalisation.htm>>.
- Official European Union Website (2020): Shaping Europe's digital future: Commission presents strategies for data and Artificial Intelligence. *Official European Union Website*, 19 February, <accessed online: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_273>.
- Official Website of the Ministry and Committee of Digital Transformation of Ukraine (2023): Ministerstvo tsyfrovoyi transformatsii [Ministry of Digital Transformation]. *Official Website of the Ministry and Committee of Digital Transformation of Ukraine*, <accessed online: <https://thedigital.gov.ua>>.
- O'Leary, D. (2022): Digitization, Digitalization and Digital Transformation in Accounting, Electronic Commerce and Supply Chains. *Intelligent Systems in Accounting, Finance and Management*, 30(2), 101–110, 29 December, <accessed online: <http://dx.doi.org/10.2139/ssrn.4307305>>.
- Seidl, T. & Schmitz, L. (2023): Moving on to not fall behind? Technological sovereignty and the 'geo-dirigiste' turn in EU industrial policy. *Journal of European Public Policy*, 31(8), 2147–2174.
- Siebert, Z. (2021): Digital Sovereignty – The EU in a Contest for Influence and Leadership. *Heinrich Böll Stiftung*, 15 February, <accessed online: <https://eu.boell.org/en/2021/02/15/digital-sovereignty-eu-contest-influence-and-leadership>>.
- Speedtest (2022a): Speedtest Global Index – Ranking mobile and fixed broadband speeds from around the world on a monthly basis. *Speedtest*, <accessed online: <https://www.speedtest.net/global-index#mobile>>.
- Speedtest (2022b): The interactive Ookla 5G Map. *Speedtest*, <accessed online: <https://www.speedtest.net/ookla-5g-map>>.
- Statista (2022): Digital Market Outlook 2022. *Statista*, <accessed online: <https://www.statista.com/outlook/digital-markets#globalCoverage>>.
- Sydoruk, T., Pavliuk, V. & Tymechuk, I. (2022): The European Union's Transformative Power in the Countries of the Eastern Partnership. *Politics in Central Europe*, 18(1), 130–131, <accessed online: <https://intapi.sciendo.com/pdf/10.2478/pce-2022-0006>>.
- Troitiño, D. (2022): The European Union Facing the 21st Century: The Digital Revolution. *TalTech Journal of European Studies*, 12(1), 60–78.
- Tsebenko, O., Ivasechko, O., Turchyn, Ya. & Holoshchuk, R. (2022a): EU Digital Market: the Future of Eastern Partnership. *CEUR Workshop Proceedings*, <accessed online: <https://ceur-ws.org/Vol-3296/paper1.pdf>>.
- Tsebenko, O., Ivasechko, O., Turchyn, Ya. & Holoshchuk, R. (2023): The Role of the EU in the Development of E-Business in the Eastern Partnership Countries. *CEUR Workshop Proceedings*, <accessed online: <https://ceur-ws.org/Vol-3608/paper3.pdf>>.
- Tsebenko, O., Lukach, N., Zavada, Y. & Stadnichenko, O. (2022b): Model for Assessing Development of E-Government in Eastern Partnership Countries. In: Kryvinska, N., Greguš, M. (eds):

Developments in Information & Knowledge Management for Business Applications. Studies in Systems, Decision and Control, vol 421. Cham: Springer, 425–447.

UCEP (2021): Na shliakhu do yedynoho tsyfrovoho rynku YeS: elektronna komertsii, telekomunikatsii, dovirchi posluhy [Towards the EU Digital Single Market: E-Commerce, Telecommunications, Trust Services]. *UCEP*, 14 June, <accessed online: <https://ucep.org.ua/doslidzhennya/na-shlyahu-do-yedynogo-cyfrovogo-rynku-yes-elektronna-kommerciya-telekomunikacziyi-dovirchi-poslugu.html>>.

UN. Secretary-General – World Commission on Environment and Development (1987): *Report of the World Commission on Environment and Development: «Our common future»*. New York: UN. Secretary-General, <accessed online: <https://digitallibrary.un.org/record/139811>>.

United Nations Development Programme (2019): Moldova Digital Transformation Compact. *United Nations Development Programme*, <accessed online: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Documents/Events/2021/Regional%20Innovation%20Forum/Digital_Moldova.pdf>.

United Nations E-Government Survey (2022): *The Future of Digital Government*. New York: United Nations Department of Economic and Social Affairs.

World Bank Group (2016): World Development Report 2016: Digital Dividends. *The World Bank Group*, <accessed online: <https://www.worldbank.org/en/publication/wdr2016>>.

Yoon, S., Minges, M. & Kwitowski, A. (2019): Azerbaijan: Country Digital Development Overview. Country Diagnostics. *Asian Development Bank*, January, <accessed online: <https://www.adb.org/sites/default/files/institutional-document/484586/aze-digital-development-overview.pdf>>.

Youngs, R. & Pishchikova, K. (2013): Smart Geostrategy for the Eastern Partnership. *Carnegie Europe*, <accessed online: <https://carnegieeurope.eu/publications/?fa=53571>>.

Zooinform (2021): E-commerce market in Belarus grew by 42%. *Zooinform*, <accessed online: <https://zooinform.global/e-commerce-market-in-belarus-grew-by-42/>>.

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