E-administracja
Wyzwania dla cyfrowych usług publicznych w Unii Europejskiej

E-Government
Challenges for Digital Public Services in the EU

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Renata Śliwa[1]

Infrastructure-driven Approach to Digital Transition

Abstract: An alternative perception of the possible impact of ICT disruptiveness of the economy is presented, one different from the one embedded in the literature highlighting the impact through "broad" capital, spillovers and "industrial innovation."

The Internet and its products and services carry, on the one hand, the drive for hyper-centralization, and on the other the drive for efficiency gains by facilitating the emergence of self-sustaining communities, fenced off by others by a belief in a common identity. Ignoring social and economic power becomes increasingly illegitimate under the pressure of the contemporary explosion of inequality and the resulting capacity of social movements.

How, then, have the legislative political processes of the EU been established in recent years to increase the participation of social groups in economic processes, to be interpreted as wider openness of the channels for more distribution of income in societies? In terms of Internet connectivity, a specific area is the regulation relating to telecommunications infrastructure.

Infrastructure forms the basis of product and service offerings in digital markets, further providing the foundation for the creation of social and economic infrastructure conditioning the inclusion of communities in a political (civic, identity) and economic (productivity) sense.

The optics presented herein (being of a contributory nature) on how the digital connectivity market is crucial in determining power and legitimization,

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competitiveness and economic prosperity entails the perception of legal and political frameworks of the information and communication sector (ICT) as strategic for an economy to thrive and widely distribute wealth across societies.

The contributory character of the chapter is based on the threefold axis of the analysis, encompassing political, legal and economic perspectives. The analysis is embedded in the review of the legal and political endeavors of the European Commission to grab the benefits of digital transformation in the economic and political interests of all EU citizens.

The Digital Market Act is based on the conviction that regulation of big technology companies, being gatekeepers, leads the way toward more competition and choice, greater innovation, better quality and lower prices. The expected shift of power is from gatekeepers to startups and small businesses as well as users across the economy. The legal underpinning of the EU political endeavor is to equip the economic and social entities with a level playing field to compete, innovate, produce and be better off.

For the processes to strengthen performant digital infrastructure, starting with reliable network connections, fast and secure connectivity is the pivotal element. Therefore, the core line of the Gigabit Infrastructure Act regulation is support for connectivity infrastructure establishment to build capacity, empower people and reinforce incentives to trade.

Keywords: information and communication sector, digital infrastructure, benefits for EU citizens

Podejście do transformacji cyfrowej, którego podstawą jest infrastruktura

Abstrakt: W rozdziale przedstawiono alternatywne postrzeganie możliwego wpływu przełomowości technologii ICT na gospodarkę. Różni się ono od osadzonego w literaturze podkreślania wpływu szeroko rozumianego kapitału, efektów zewnętrznych i „innowacji przemysłowych".

Internet oraz jego produkty i usługi niosą ze sobą, z jednej strony, dążenie do hipercentralizacji, a z drugiej, dążenie do wzrostu wydajności poprzez ułatwianie powstawania samowystarczalnych społeczności, wyróżniających się od innych wiarą we wspólną tożsamość. Ignorowanie wyłaniającej się władzy społecznej i ekonomicznej staje się coraz bardziej nieuprawnione pod presją współczesnej eksplozji nierówności i wynikającej z niej zdolności ruchów społecznych.

W jaki sposób zatem w ostatnich latach legislacyjne procesy polityczne UE zostały ustanowione w celu zwiększenia udziału grup społecznych w procesach gospodarczych, co należy interpretować jako szersze otwarcie kanałów dystrybucji dochodów w społeczeństwach? Jeśli chodzi o łączność internetową, szczególnym obszarem są regulacje dotyczące infrastruktury telekomunikacyjnej. Infrastruk-

tura ta stanowi podstawę oferty produktowej i usługowej na rynkach cyfrowych, stanowiąc fundament dla tworzenia infrastruktury społecznej i ekonomicznej warunkującej inkluzję społeczności w sensie politycznym (obywatelskim, tożsamościowym) i ekonomicznym (produktywności).

Przedstawiona tu optyka, dotycząca tego, w jaki sposób rynek łączności cyfrowej ma kluczowe znaczenie dla określania władzy i jej legitymizacji, konkurencyjności i dobrobytu gospodarczego, pociąga za sobą postrzeganie ram prawnych i politycznych sektora informacyjno-komunikacyjnego (ICT) jako strategicznych dla rozwoju gospodarki i szerokiej dystrybucji bogactwa w społeczeństwach.

Charakter tego rozdziału opiera się na potrójnej osi analizy, obejmującej perspektywę polityczną, prawną i ekonomiczną. Analiza opiera się na przeglądzie prawnych i politycznych wysiłków Komisji Europejskiej mających na celu czerpanie korzyści z transformacji cyfrowej w interesie gospodarczym i politycznym wszystkich obywateli UE.

Digital Market Act opiera się na przekonaniu, że regulacja dużych firm technologicznych, kontrolujących dostęp (g*atekeeper*), prowadzi do większej konkurencji i wyboru, większej innowacyjności, lepszej jakości i niższych cen. Oczekuje się przesunięcia władzy od gatekeeperów do start-upów *i małych firm, a także do użytkowników w całej gospodarce. Podstawą prawną działań* politycznych UE jest zapewnienie podmiotom gospodarczym i społecznym równych szans w zakresie konkurowania, innowacji, produkcji i poprawy warunków życia.

W procesach mających na celu wzmocnienie wydajnej infrastruktury cyfrowej, począwszy od niezawodnych połączeń sieciowych, szybka i bezpieczna łączność jest kluczowym elementem. W związku z tym podstawową linią rozporządzenia *Gigabit Infrastructure Act* jest wspieranie tworzenia infrastruktury łączności w celu budowania zdolności, wzmacniania pozycji ludzi i wzmacniania zachęt do handlu.

Słowa kluczowe: sektor informacyjno-komunikacyjny, infrastruktura cyfrowa, korzyści dla obywateli UE

1. Introduction

The choices of technology determine progress. The meaning hidden here is that innovative ways of production or/and communication entail the empowerment of society to produce, but also narrow interest groups to dominate. To stimulate stable economic development it is crucial to include the public in the widest possible use of technology and access to infrastructure of particular economic importance, such

as telecommunications infrastructure. Critical infrastructure is the foundation for creating security, a myriad of productive opportunities, public services and strong pro-investment incentives, where broad segments of society have access to opportunities to develop economic activities, take up jobs, knowledge and skills that are within their reach through public services.[2]

Nowadays, demand for better connectivity is growing as services and applications that take advantage of the greater bandwidth emerge. Broadband infrastructure investment is indispensable in supporting the overall growth agenda. This is the way businesses manage change. Opportunities expand into new markets to communicate with customers and suppliers, as well as to operate more efficiently by bringing costs down adjust to the emerging technological capacities. The benefits of speedy broadband have an impact across the whole economy – whether through greater scope for teleworking and homeworking, which reduces pressure on the transport network and lowers carbon emissions, or better delivery of public services – such as remote education and health services. To secure these objectives, the use of the internet is going to require significant improvements in the network most people currently use. A mix of technologies – fixed, wireless and satellite – is compulsory to deliver fast broadband throughout a country, region or worldwide. Even if the approach to delivery access remains technologically neutral, it must be recognized that high-capacity fibre optics installed deeper into the network is likely to be a key feature of the network going forward.

At the same time, it is of key importance to stimulate the development of the next generation of mobile broadband services based on new wireless technologies. Providing the right regulatory and policy climate to allow the market to deploy beyond the more densely populated areas, otherwise to ensure access to telecom infrastructure, such as the network of ducts, poles and others, delivers the potential for businesses to develop in less densely populated areas. Can't understand what this is trying to say, looked at it many times.

The optics presented herein (being of a contributory nature) on how the digital markets/connectivity market is crucial in determining power and legitimization, competitiveness and economic prosperity, entails the perception of legal and political frameworks of the information and communication sector (ICT) as strategic for an economy to thrive and distribute the wealth widely across societies. The analysis is embedded in the review of the legal and political endeavors of the European Commis-

[2] D. Acemoglu, J. A. Robinson, *Wąski korytarz. Państwa, społeczeństwa i losy wolności*, F. Filipowski (transl.), Poznań 2022, p. 208.

sion (EC) to grab the benefits of digital transformation in the economic and political interest of all EU citizens.

2. The concept of the analysis

The main axis of the analysis is threefold, encompassing political, legal, and economic perspectives. Political (strategy) is recognized as the implementation of socioeconomic goals, legal (regulatory in the sense of legislative), as regulatory support means the translation of the socioeconomic goals into legal rules, and economic (regulatory in the sense of stimulative) perspective is recognized as shaping the behavior of actors so that the benefits derived from the disruptiveness of technology are not accumulated for the few but widely among the public. The core of the threefold perception is to highlight the importance of leverage of technological advancement to secure the wide distribution of technological benefits.

The rationale for the analysis being embedded in the political, legal and economic perspective is grounded in the following:

From an economic perspective:

1) Communication technologies bring opportunities related to accelerating the collection, creation, analysis and transmission of data, which is driving digital transformation.
2) The effects of the advancement of these technologies, such as artificial intelligence, cloud computing, mobile technologies, social media platforms and next-generation technologies, i.e., the Internet of Things, edge computing (computing power and data collection close to the source of data acquisition), revolutionarily robotization of processes, metaverse and quantum computing are changing the speed of transmission and acquisition of information, leading to innovative digital products, services and organizations (Amazon, Airbnb, Uber, etc.). They also change customer preferences for expected products and services (quick response, products and services tailored to customers' needs, expectation of easy-to-use interfaces, preferences to digitally interact anytime from any device).

From a political perspective:

3) Information is a form of power, and if the Internet has increased everyone's access to information it should also distribute power more broadly. The expanding social media in particular seems a useful tool for mobilization, allowing like-minded groups to unite around issues of common concern. The very nature of the Internet, based on connections between individual users, should contribute to eliminat-

ing the tyranny of hierarchical gatekeepers of all kinds overseeing the nature of information available to people.[3]

4) The development of alternative media is an important factor in increasing the opportunities for the participation and the scope of power of broad sectors of society in shaping the political process (in addition to the political and legal order, pluralism and civil society institutions).[4]
5) Striving for even greater pluralism and broader participation in the political process – the creation of inclusive political institutions (independent media strengthened by ICT, organizing an informed public against threats publicized by the media), support of inclusive economic institutions (influential associations, unions, chambers of commerce with the opportunity to present their positions/interests, elections, public consultations and impact assessment), leading to a more even distribution of income.[5]

From a legal perspective:

6) Law is perceived as the language to assign power to an entity, to dominate or to enforce subordination.

The hypothesis for further considerations is that political processes, established by law (legislation), allow economic capacity building in such a way that by increasing the participation and scope of empowerment of broad social groups they are being included in economic processes.

Here is an alternative perception of the possible impact of ICT technology disruptiveness on the economy, to the one embedded in the literature highlighting the impact through "broad" capital, spillovers, and "industrial innovation."[6]

The Internet and its products and services carry, on the one hand, the drive for hyper-centralization, and on the other the drive for efficiency gains by facilitating the emergence of self-sustaining communities, fenced off from others by a belief in a common identity. Ignoring social and economic power becomes increasingly illegitimate under the pressure of the contemporary explosion of inequality and resulting capacity of social movements.

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3 F. Fukuyama, *Tożsamość. Współczesna polityka tożsamościowa i walka o uznanie*, J. Pyka (transl.), Poznań 2019, p. 221-223.

4 D. Acemoglu, J. A. Robinson, *Dlaczego narody przegrywają. Źródła władzy, pomyślności i ubóstwa*, J. Łoziński (tranls.), Poznań 2014, p. 511.

5 *Ibidem*, p. 344.

6 L.-H. Röller, L. Waverman, *Telecommunications Infrastructure and Economic Development: A Simultaneous Approach*, "The American Economic Review" 2001, vol. 91, no. 4.

How, then, have the legislative political processes of the EU been established in recent years to increase the participation of social groups in economic processes, to be interpreted as wider openness of the channels for more distribution of income? In terms of Internet connectivity, the specific area is the regulation relating to telecommunications infrastructure. The infrastructure forms the basis of product and service offerings in digital markets, further providing the foundation for the creation of social and economic infrastructure conditioning the inclusion of communities in a political (civic, identity) and economic (productivity) sense.

3. Contemporary legal acts on the EU level

3.1. The Digital Market Act

Weak contestability of the market reduces the incentives to innovate services and products, and negatively affects the potential of an online platform economy to innovate.

Following Directive (EU) 2018/1972 establishing the European Electronic Communications Code and the Digital Single Market Strategy (2015), the Digital Market Act (DMA, Regulation 2022/1925) confirms the European Commission's efforts to intensify the activities of the multiple players (alternative to Big Tech) in the ICT sector.

The DMA is the legal operationalization of the procompetitive EU regime for digital markets to function more fairly and open, and, especially, for the dominating online platforms to operate more transparently. European law authorities, by introducing the Digital Market Act into its legal system, aim to prevent core platform services (online intermediation services, online search engines, operating systems, online social networking, video sharing platform services, number-independent interpersonal communication services, cloud computing services, virtual assistants, web browsers and online advertising services), featured by high barriers of entry or exit, high sunk costs, reduced (or no-access) to key input such as data,[7] from abusing their dominant market power. The role of a gatekeeper providing core platform services is to be stopped or

[7] Features derived from: scale or scope economies, network effects, significant degree of dependence of business and end users (multi-sidedness of the services), lock-in effects, a lack of multihoming for the same purpose by end users, vertical integration or conglomerate corporate structure, data-driven advantages; Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), OJ 2022, L 265/1.

at least made more difficult in terms of forcing the users to use only their platforms, tracking users' internet activity for advertising purposes or others.

The contestability of core platform services being digital services is of chief importance in terms of price, quality, and other layers of fairness of the commercial relationships. Contestability and unfairness are intertwined as the dominant market power of gatekeepers triggers unfair practices, and the dominance-driven discrimination by gatekeepers disactivates the alternative to gatekeepers businesses to compete, and then users to fully and securely exploit the Internet's potential.

More restrictions on gatekeepers on such exemplary behaviors such as on how they utilize users' data, message services, team up and share users on social media platforms, provide options to uninstall preloaded applications on devices, rank gatekeepers' own products and services higher than that of other (competitors) on search engines,[8] and direct the Internet towards fairer and safer opportunities for innovators.

From a legislative perspective, the DMA is the regulatory response not so much to unwanted symptoms (as is General Data Protection Regulation), but to the causes of monopolistic digital platforms, companies providing digital platforms, app stores, digital browsers, advertising and applications.

From a political perspective, the DMA is an element of the European digital strategy „Shaping Europe's Digital Future": "Technology that works for the people; A fair and competitive digital economy; An open, democratic and sustainable society."[9]

From a economic perspective, the DMA secures the use of ICT for the development of digital skills, protection against network attacks, increasing confidence in AI, accelerating the spread of ultrafast broadband for homes, schools and hospitals, strengthening the potential for the development of high computing power (supercomputing, quantum computing) for innovation in medicine (quantum computing: pharmaceuticals, the chemical industry), transportation, ecology and finance. Creating conditions for increased competitiveness in digital markets means an enabling environment for the growth of innovation, startups, small businesses, regulating the market behavior of dominant online platforms, ensuring fair competition for all businesses in Europe, ensuring secure data trading, use of ICT to combat environmental pollution, influence citizens to protect their data, combat disinformation by them.

In a macroeconomic sense, the DMA is to improve competitiveness in European digital markets, facilitate cross-border trade, neutralize the market dominance of large corporations (Big Tech), stimulate the activities of smaller companies and protect the

8 *Ibidem*.

9 European Commission, *Shaping Europe's Digital Future*, Brussels, 19.2.2020, COM(2020) 67 final.

fundamental rights of all users of digital services. In a microeconomic sense, the DMA serves to enable businesses to reach users, open entirely new business opportunities to many companies to the benefit of consumers, introduce a list of responsibilities for gatekeepers and establish financial sanctions for violations of the regulations.

3.2. The Gigabit Infrastructure Act

As the balance between the need to provide the public with full access to telecommunications services and the search for ways to strengthen sector investment continues, on 23 February 2023 the EC proposed the Regulation of the European Parliament and of the Council on measures to reduce the cost of deploying gigabit electronic communications networks (Gigabit Infrastructure Act; GIA). The trend to search the balance has resounded with the EC's strong emphasis on favoring the integration of the mobile telecom market (building a single telecom market), as confirmed in 2023 statements by the commissioner responsible for the development of electronic communications in the EU.[10]

The GIA as a legislative strengthening of policy statements building economic capacity to provide resilient and secure connectivity across the EU. The infrastructure-driven process of digital transformation significantly contributes to create incentives to invest and innovate. Particularly important in this regard is ensuring access to fair competition by small and medium operators. Facilitating and incentivizing fibre and 5G network rollout in terms of reducing the cost of deploying very high-capacity electronic communication networks (exploitation of existing passive infrastructure, civil works, permit-granting procedures, in-building infrastructure deployment) is of chief importance in the process of strengthening sustainability and the resilience of an economy.

The GIA is a response to the requirement of massive investment in fibre and densification of antenna induced by the increased significance of connectivity and the call for accommodation and integration of new and emerging technologies aligned with redundancy and cybersecurity standards.

From a legislative perspective, the GIA is the EC proposal from February 23, 2023, being the revision of the Broadband Cost Reduction Directive (2014) to stimulate „faster, cheaper and more effective roll-out of Gigabit networks across the EU."[11]

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[10] S. Bichento, *EU Confirms "Single Telecoms Market" Policy*, https://telecoms.com/519735/eu-confirms-single-telecoms-market-policy/ (23.07.2023).

[11] *Commission Presents New Initiatives, Laying the Ground for the Transformation of the Connectivity Sector in the EU*, Press release, Brussels, 23.02.2023, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_985 (20.06.2023).

From a political perspective, the GIA is a cornerstone of the EU digital strategy, one of the European Electronic Communications Code's (2018) objectives, as well as support for the Digital Decade (2021), targeted on connectivity – „By 2030 everyone across the EU has access to fast Gigabit connectivity and fast mobile data" – and the Digital Policy Programme (2022), including political targets for 2030 being an enshrined vision of the "Digital Decade."

From an economic perspective, the GIA is a response to an urgent need to depend on the availability of faster, more reliable, data-intense connections for prospering economic relations. The pressing need for their building require the simplification of administrative procedures for investors to get access to existing telecom infrastructure as well as digitalization of procedures for the gigabit network operators rolling out their networks, reduction of delays related to permit-granting and dispute resolution, integrating the civil works so that other network operators (electric, gas, water, electricity, transport) cooperate with electronic communications operators and deploy the fibre network inside newly built or renovated buildings.

4. Telecom infrastructure to drive shift of power and inclusion

The transformative and market developments faced by digital markets, and connectivity markets in particular, are manifested in tremendous challenges arising from the still-advancing technology related to cloud data storage, the transition to edge computing, the usability of the Metaverse, artificial intelligence, virtual reality and quantum computing, to mention some. They all call for more investment and their operators to grab a premium for priority (billions of dollars already spent by Google, IBM, Microsoft). The significant market power of core online platforms serving as gatekeepers between businesses and internet users excessively determine infrastructure innovations and consumer choice. And, if more than 90% of over 10,000 online platforms which operate in the EU are small and medium enterprises,[12] ensuring a level playing field for all digital companies is expected to boost innovation and also competitiveness in terms of infrastructure competition (not just service competition).

[12] European Commission, *Europe Fit for the Digital Age: New Online Rules for Platforms*, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment/europe-fit-digital-age-new-online-rules-platforms_en (24.06.2023).

Since the distribution of economic power translates into distribution of political power,[13] through widespread access to channels of informatization and communication, broad sections of society are included in the opportunity to use resources. With the stimulation of infrastructure expansion, a more even distribution of resources and access to them is ensured (more companies strengthen, productivity increases). By demonopolizing online platforms, the scope of participation of smaller players in reaping technological benefits (including participation in the premium for priority) is increased, empowering the social masses and getting them stronger politically.

Table 1. The DMA and GIA through the lens of shift of power and inclusion

Perspectives/ Acts	Legislation	Political	Economic
Shift of Power			
DMA	Restrictions toward gatekeepers exercising their power on digital markets	Providing alternative innovators with faster and safer opportunities to innovate	Improved competitiveness in digital markets to enable the growth of startups and small businesses
GIA	Ensured access to fair infrastructure competition by small and medium operators	Support toward ensuring everyone in the EU access to fast Gigabit connectivity	Stimulate more investors to deliver business and other users faster and more reliable connections
Inclusion of Communities to the Opportunity to Use ICT Resources			
DMA	Assignment of more rights to users to protect themselves from gatekeepers, forcing users to use only their services, to track users data to solicit by advertising	Fairer commercial relations to activate more startups and small innovators, opening up to more people	More open and fairer digital markets to stimulate the development of digital skills, provide confidence to artificial intelligence and other accelerated technological disruptiveness of medical, financial, transport services
GIA	Legal support to build the capacity to provide resilient and secure connectivity	Provide Gigabit connectivity and fast mobile data transfer to empower people	Make more reliable and data-intense connections available across Europe through massive fibre and antenna investment to strengthen incentives to trade

Source: own elaboration.

[13] D. Acemoglu, J. A. Robinson, *Dlaczego…*

More equal distribution of economic power promotes greater income distribution (more competition, lower prices, increased productivity, higher income for more) and stronger political inclusion. Infrastructure-catalyzed production of numerous services for private and public purposes underpins economic, social and political progress.

Because of the all-presence and critical importance of the infrastructure, it constitutes the core of social value creation in society. Therefore, for society to function well, the widespread and secure access to infrastructure define the power and inclusion of a multitude of social communities. If the infrastructure is perceived as "shared means to many ends,"[14] socially unjustified dominance over critical infrastructure of private interests threatens equitable access, excludes many eligible communities and results in significant social and economic harm. To prevent the management of infrastructure resources from deficiency (for example, the consequence of market oligopolization or monopolization), leading to inconsistent provision and then exclusion, governments intervene into markets to tune the infrastructure capacity to public interest. Acting at the political and then legislative layer, governments secure the tremendous opportunity of private sector entities to harness the power of digital technology disruption to balance the political and economic power by expanding access to education and healthcare. As a consequence of the power shift, more social communities have a chance to escape from poverty, target innovation and integrate/be included into economic product generation and participate widely in their distribution.

The telecommunication networks (provision of connectivity) transforming into platforms (convergence of connectivity and computing capacity) represents the service aspect of infrastructure-driven digital development, where connectivity providers become service providers. "Infrastructure-as-a-service" is a name for a service domain featured by physical network interconnections and application programming interfaces.

Digital government services meant as information and communication technologies in the service of delivery within a government constitute a sort of infrastructure to serve the public. Digital public infrastructure exists as a platform to proceed identification, payment, and data exchange to deliver and support delivering public services.[15]

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[14] B. M. Frischmann, *Infrastructure. The Social Value of Shared Resources*, Oxford 2013, p. 4.

[15] L. M. Nordhaug, L. Harris, *Digital Public Goods: Enablers of Digital Sovereignty* [in:] OECD, *Development Co-operation Report 2021. Shaping a Just Digital Transformation*, 2021, https://www.oecd-ilibrary.org/sites/c023cb2e-en/index.html?itemId=/content/component/c023cb2e-en (20.06.2023); V. Desai et al., *How Digital Public Infrastructure Supports Empowerment, Inclusion, and Resilience*, 15.03.2023, https://blogs.worldbank.org/digital-development/how-digital-public-infrastructure-supports-empowerment-inclusion -and-resilience (20.06.2023).

The infrastructure lay the foundations of the connect-sense-and-respond capabilities integration of communities to revive their identity, redefine functionality and empower. By linking physical and system layers with data and sensors, communities get interconnected to plan, design and integrate to evolve. Communities, building a culture of transparency by adopting data-sharing platforms with established adaptable cybersecurity protections across the systems, provide substantial support to underpin a wide range of services to people for a more socially and ecologically resilient and inclusive economy.

5. Conclusions

Policy and legal frameworks for digital governance help facilitate the adoption of mechanisms to secure the highest possible digital standards, and at the same time not to hinder capacity building. Digital governance aiming to improve institutional resilience, trust and inclusiveness are due to the balance of power. Technological and market developments determining networks to come and business models for still advancing electronic communication technology, standards underlying fairness for consumers, stimulation of contribution by all digital players, and elimination of the barriers to the Single Market, underpinned the EC political and legislative endeavors to boost digitalization of the EU economy.

The DMA is based on the conviction that regulation of big technology companies, being gatekeepers, lead the way toward more competition and choice, greater innovation, better quality and lower prices. The expected outcome is a shift of power from gatekeepers to startup and small businesses as well as to users across the economy. The legal underpinning of the EU political endeavors is to equip economic and social entities with a level playing field to compete, innovate, produce and be better off.

For the processes to strengthen performant digital infrastructure, starting with reliable network connections, speed and secure connectivity is the pivotal element. Therefore, the core line of the GIA regulation is support for connectivity infrastructure establishment to build capacity, empower people and reinforce incentives to trade.

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Przedstawia ona analizę wdrożenia i funkcjonowania cyfrowych usług publicznych w Polsce i w Europie ze szczególnym uwzględnieniem związanych z tym wyzwań. Dotyczą one m.in. rozwoju infrastruktury teleinformatycznej, zapobiegania wykluczeniu cyfrowemu oraz zapewniania ochrony prywatności i bezpieczeństwa obywatelom.

Książka adresowana jest do badaczy zajmujących się administracją, prawem administracyjnym i europejskim oraz do praktyków w wymienionych dziedzinach. Mamy nadzieję, że publikacja poszerzy wiedzę czytelników na temat cyfryzacji usług publicznych oraz zachęci środowisko naukowe do dalszych badań w tym zakresie.

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The book presents an analysis of the implementation and functioning of digital public services in Poland and Europe with a particular focus on the challenges involved. These include the development of ICT infrastructure, preventing digital exclusion and ensuring privacy and security of citizens.

The monograph is addressed to researchers in administration, administrative and European law as well as to practitioners in the mentioned fields. We hope the publication will broaden the readers' knowledge of the digitization of public services and encourage the scientific community to further research in this area.

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