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## ASSUMPTIONS AND DEVELOPMENT OF THE DIGITAL SINGLE MARKET IN THE CONTEXT OF ECONOMIC GROWTH IN THE EUROPEAN UNION\*

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### ZAŁOŻENIA I ROZWÓJ JEDNOLITEGO RYNKU CYFROWEGO W ASPEKCIE WZROSTU GOSPODARCZEGO W UNII EUROPEJSKIEJ

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**Summary:** The digital revolution, the Internet and digitisation have fundamentally influenced human life, businesses, trade and the development of the economy. Globalisation has entered a new phase “underpinned by the movement of data across national borders, changing the nature, patterns and actors in international trade in goods and services” [OECD 2017, p. 2]. As a consequence of the ongoing phenomena, there are also changes within the framework of the functioning of the single market in the European Union (EU). The aim of the article is to present the main assumptions of the Digital Single Market (DSM) in the European Union and the state of their implementation. The adopted research method includes a literature survey, a study of the strategic documents of the European Union and their critical analysis. The article systematizes knowledge of the Digital Single Market in the European Union and completes it with the presentation of selected data, which allows for a better understanding of its significance for the development of European integration and economic growth.

**Keywords:** Digital Single Market, European Union, economic growth, digital economy.

**Streszczenie:** Rewolucja cyfrowa, Internet i cyfryzacja mają wpływ na: wiele aspektów życia ludzkiego, przedsiębiorstwa, handel i rozwój gospodarki. Globalizacja wkroczyła w nową fazę, w której istotne znaczenie ma przepływ danych także pomiędzy granicami państw. W konsekwencji zachodzących zjawisk zauważalne są także zmiany w ramach funkcjonowania jednolitego rynku Unii Europejskiej (UE). Celem tego artykułu jest przedstawienie głównych założeń jednolitego rynku cyfrowego Unii Europejskiej, a także próba dokonania oceny dotychczasowego stanu jego realizacji. Przyjęta metoda badawcza obejmuje studium literatury przedmiotu oraz dokumentów strategicznych Unii Europejskiej i ich krytyczną analizę. Artykuł systematyzuje wiedzę na temat funkcjonowania jednolitego rynku cyfrowego i uzupełnia ją o prezentację wybranych danych wtórnych, co pozwala lepiej zrozumieć jego znaczenie dla rozwoju integracji europejskiej i wzrostu gospodarczego w Unii Europejskiej.

**Słowa kluczowe:** jednolity rynek cyfrowy, Unia Europejska, wzrost gospodarczy, gospodarka cyfrowa.

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## 1. Introduction

For years, economic interests have driven European integration. One of the main achievements was to create a single market. In early 1993, this became a reality for 12 EU countries, and in the following year the agreement on the European Economic Area (EEA) entered into force, extending the single market to 31 countries. The single market is characterised by four fundamental freedoms and encompasses the free movement of goods, services, capital, and labour. All of them reflect the European goals of economic integration and simultaneously have supported economic growth in a free market economy [Bublitz 2018].

The Internet and digitization have fundamentally influenced human life, businesses, trading and the development of the economy. Globalisation has entered a new phase “underpinned by the movement of data across national borders, changing the nature, patterns and actors in international trade in goods and services” [OECD 2017, p. 2]. As a consequence of the ongoing phenomena, there are also changes within the framework of functioning of the single market in the European Union (EU).

The aim of the article is to present the main assumptions of the Digital Single Market (DSM) in the European Union and the state of their implementation. For the purposes of accomplishing the said objectives, the article is divided into sections. At the beginning, the significance of the digital revolution in the aspect of the economic growth is explained. In the following section, the most important premise of creating the DSM and its main assumptions are identified. The adopted research method includes a literature survey, a study of the legal regulations and the strategic documents of the European Union as well as their critical analysis. A discussion on the state of implementation of the Digital Single Market and its significance for European integration and economic growth is presented in the following section. The last section offers conclusions.

## 2. The digital revolution and economic growth

M. Castells [2010], referring to technological transformation, notes that it implies social changes which favor the creation of a network society. Describing these phenomena, he drew attention to several important features that constitute “the heart of the information technology paradigm” and are “the material foundation of the network society” [Castells 2010, p. 70]. The following features are worth pointing out [Castells 2010]:

- information is its raw material (these are technologies to act on information, not just information to act on technology),
- the pervasiveness of the effects of new technologies is observed,
- the information technology paradigm is based on flexibility,
- a characteristic feature of this technological revolution is the growing convergence of specific technologies into a highly integrated system.

The digital revolution is fundamentally changing the way people, businesses and governments interact. Information technologies have moved from stationary computer stations to mobile devices. Mobile applications, cloud computing, social media, and big data are examples of tools and technologies that shape contemporary economies and societies [Grzyb 2017].

The emergence of the digital economy is a consequence of technological development and increasingly widespread digitalization. A. Nițescu [2016, p. 103] notes that “a digital economy implies the creation of new markets, new market regulations, and new models of behaviour for producers and consumers, new money, new distribution networks.” A digital economy is characterized by a number of features diverging from the traditional. The following are worth noting [Nițescu 2016, pp. 103-104]:

- it creates a new business model (e-Business, e-Commerce, e-Banking, etc.),
- it has an interactive, participatory character, the role of the consumer is more important (e.g. the consumer may become a significant source of innovative ideas for producers),
- the forms of competition among producers are changed by the priority that is given to a consumer (the necessity of constant adaptation to new needs and expectations of the consumer increases the need to compete).

Digital trade includes “cross-border transactions that are digitally ordered, platform-enabled, or digitally delivered” [IMF 2018, p. 27]. It is noteworthy that nowadays significant income streams can be also generated through data itself. Their collection and dissemination is subject to national and international laws. Consequently, digital trade presents significant challenges for policy makers (e.g. the way international trade and investment policy-making is conducted) and businesses [OECD 2017].

A. Nițescu [2016, p. 104] emphasises that “the contribution of the digital economy to the economic growth and to the creation of new jobs is undeniable.” E.M. Roszko-Wójtowicz and J. Białek [2017, p. 195] note that economic growth should be equated with a long-term process leading to increased production and/or the stock of goods and services in a given country. It should also increase the country’s ability to produce goods and services desired by society. Economic growth is affected by factors such as natural resources, human resources, capital, and technology [Samuelson, Nordhaus 2012]. In this context, the latter factor becomes particularly important. Nowadays ICT makes a business environment conducive to investment and entrepreneurship. The impact of information and communication technology (ICT) on economic growth or labour productivity has already been discussed in many papers (Table 1).

The digital revolution has affected the functioning and development of contemporary economies. The importance of the ICT sector<sup>1</sup> is growing in the economy.

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<sup>1</sup> The ICT sector is defined as “a combination of manufacturing and services industries that capture, transmit and display data and information electronically.” See: [OECD, Annex 1].

**Table 1.** Overview of selected studies

Author(s)	Study area
A. Colecchia, P. Schreyer [2002]	examined the impact of ICT capital accumulation on output growth in Australia, Canada, Finland, France, Germany, Italy, Japan, the United Kingdom, and the United States (9 OECD countries in 1980-2000)
P. Koutroumpis [2009]	investigated how broadband penetration affects economic growth (22 OECD countries based on data collected for the period 2002-2007)
A. Yousefi [2011]	examined whether, and to what extent, information and communication technology has helped to improve economic growth (62 developed and developing countries using time-series cross-country data for the period of 2000-2006)
F. Quatraro [2011]	examined whether information and communication technologies hardware and services play a complementary role in boosting economic growth
J. Hanclova, P. Doucek, J. Fischer, K. Vltavska [2014]	examined economic growth mainly due to changes in information and communication technology capital development (in old and new member countries of the European Union (EU 15 and EU 12) in 1994-2000 and 2001-2008)
R.P. Pradhan, M.B. Arvin, N.R. Norman, S.K. Bele [2014]	examined the links between the development of telecommunications infrastructure (DTI), economic growth, and four key indicators of operation of a modern economy: gross capital formation, foreign direct investment inflows, urbanization rates, and trade openness (the G-20 countries over the period 1991-2012)

Source: author's own elaboration.

It is noteworthy that the dynamic development of the ICT sector also drives changes and boosts the creation of new solutions in other economic sectors. The use of the Internet and digital technologies in trade has not only influenced the creation of new opportunities and facilitations, but has also caused the need to implement new legal regulations.

### 3. The Digital Single Market (DSM)

#### 3.1. Premises for creating the DSM

One of the ten priorities of the European Commission (EC) for the period 2015-2019 was creating a connected Digital Single Market. In July 2014, Jean-Claude Juncker emphasised that “by creating a connected DSM, we can generate up to € 250 billion of additional growth in Europe (...), thereby creating hundreds of thousands of new jobs, notably for younger job-seekers, and a vibrant knowledge-based society” [Juncker 2014, p. 6]. Thereby the European Commission noted that barriers online may deny people the full benefits that digital development can offer (e.g. citizens do not have access to all goods and services); Internet companies and start-ups have limited development opportunities.

The digital revolution, internet, and digitalization are transforming the world. Therefore, when referring to the premise of creating the DSM, it is worth pointing out several arguments with an economic dimension:

- Digital economy – the global economy is becoming a digital economy; moreover, a digital economy has the potential to create growth and employment by providing opportunities for investment and innovation, which leads to expanding markets and a wider selection of goods and services [European Commission 2015],
- Digital technology – creates new business ecosystems, spurs innovation in business models, promotes the transfer of knowledge across the economy, boosts productivity and reduces transaction and information costs [Ibec 2016], the positive effect of digitalization on the economy is correlated with the number of potential customers (the larger the market, the stronger the growth impulse) [European Commission 2015].
- The digital sector – growing seven times faster than the rest of the economy [Žak, 2016].
- Benefits: generated by e-commerce growth such as lower prices, wider selection and better quality of goods and services, benefits for enterprises such as: access to new markets beyond national, use of online services and access to cloud computing (which can improve the productivity of companies) [Pleșea Doru et al. 2014].

In view of the ongoing technological changes, it seems that the creation of the digital market is their natural consequence, a response to the changing reality. The belief that e-commerce differs significantly from traditional trade may create distortions of competition. Therefore the implementation of regulations in the field of the digital market, seems highly necessary. What is also important in the context of unblocking the opportunities offered by new technologies is digitalization for increasing competitiveness and economic growth. The digital market is also important from the perspective of European economic integration; its added value is the European Single Market with its free movement of goods, people, services and capital.

### 3.2. Assumptions of the Digital Single Market

The European Commission defines the Digital Single Market as one “in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence” [European Commission 2015, p. 3]. The Digital Single Market Strategy was adopted on 6 May, 2015. The European DSM aims to reduce barriers and offer more opportunities to do business across EU borders. The following were listed among the most important objectives [European Commission 2019d]:

- boosting e-commerce in the EU by tackling geo-blocking,
- modernising the EU copyright rules,

- stepping up Europe’s response to cyber-attacks,
- unlocking the potential of a European data economy,
- ensuring the best possible internet connection (“connectivity for a European gigabit society”)
- adapting ePrivacy rules to the new digital environment.

**Table 2.** Pillars of the EU’s Digital Single Market Strategy

	Access	Environment	Economy and society
Pillars	Better access for consumers and businesses to online goods and services across Europe	Creating the right conditions for digital networks and services to flourish	Maximising the growth potential of our European Digital Economy
Selected actions	<ul style="list-style-type: none"> <li>• rules to make cross-border e-commerce easier;</li> <li>• more efficient and affordable cross-border parcel delivery;</li> <li>• preventing unjustified geo-blocking;</li> <li>• a modern, more European copyright law;</li> <li>• reducing VAT related burdens and obstacles when selling across borders</li> </ul>	<ul style="list-style-type: none"> <li>• an overhaul of EU telecoms rules;</li> <li>• reviewing the audio-visual media framework to make it fit for the 21st century;</li> <li>• analysing the role of online platforms in the digital single market and assessing how to tackle illegal content;</li> <li>• increasing trust and security in digital services and handling personal data</li> </ul>	<ul style="list-style-type: none"> <li>• proposing a ‘free flow of data initiative’ and a ‘European cloud’ initiative;</li> <li>• defining priorities for standards and interoperability of devices, applications, data repositories, services and networks which are critical to the digital single market;</li> <li>• supporting an inclusive digital society where citizens and businesses have the necessary skills and can benefit from interlinked and multi-lingual e-services</li> </ul>

Source: author’s own elaboration based on [European Commission 2015].

The Digital Single Market Strategy is based on three pillars (Table 2). For each pillar, the European Commission proposed targeted actions.

### 3.3. The European Digital Single Market – achievements

Up till now the vast majority of legislative initiatives which were presented by the Juncker Commission, were politically agreed on or finalised by the European Parliament and the Council of the European Union. With the entry into force of the Digital Single Market Strategy, many initiatives have been implemented (Table 3).

The EU has worked on revised consumer protection rules that will enter into force in 2020 and new VAT rules for the online sales of goods and services that will enter into force in 2021 to realise the full potential of e-commerce. Among the “environment pillars”, the European Commission proposed a set of measures to ensure that everyone in the EU will have the best possible internet connection to participate in the digital society and economy and announced the launch of a contractual Public-Private Partnership on cybersecurity in 2016. It is also noteworthy that [European Commission 2019a]:

- around €43.2 billion has been invested in the digital sector (from the European Fund for Strategic Investments),

**Table 3.** Implementation of the Digital Single Market Strategy

Pillar	Access	Environment	Economy and society
Selected undertaken initiatives/actions	<ul style="list-style-type: none"> <li>reviewing the Regulation on Consumer Protection Cooperation,</li> <li>preparing legislative proposals for simple and effective cross-border contract rules for consumers and businesses,</li> <li>preparing legislative proposals for a reform of the copyright regime,</li> <li>preparing legislative proposals to reduce the administrative burden on businesses arising from different VAT regimes.</li> </ul>	<ul style="list-style-type: none"> <li>reviewing the Audio-visual Media Services Directive,</li> <li>preparing legislative proposals to reform the current telecoms rules,</li> <li>establishing a Cybersecurity contractual Public-Private Partnership.</li> </ul>	<ul style="list-style-type: none"> <li>implementing a new e-Government Action Plan,</li> <li>initiatives on data ownership, free flow of data and on a European Cloud,</li> <li>extending the European Interoperability Framework for public services.</li> </ul>

Source: author's own elaboration based on [European Commission 2017].

**Table 4.** The European Union – selected indicators

INDICATOR	2015	2016	2017	2018
<b>Enterprises with a fixed broadband connection</b> – all enterprises (in % of enterprises)	93	92	93	n/a
<b>Enterprises providing portable devices to persons employed</b> – all enterprises (in % of enterprises)	65	69	70	65
<b>Households with access to the Internet at home</b> – all households (in % of households)	83	85	87	89
<b>Internet used in the last 3 months</b> – all individuals (in % of individuals)	79	82	84	85
<b>Regular Internet users</b> – all individuals (in % of individuals)	76	79	81	83
<b>Used Internet storage space</b> – all individuals (in % of internet users, last 3 months)	31	32	35	37
<b>Online banking</b> – all individuals (in % of internet users, last 3 months)	57	59	61	64
<b>Information about goods and services</b> – all individuals (in % of internet users, last 3 months)	77	80	78	82
<b>Participating in social networks</b> – all individuals (in % of internet users, last 3 months)	63	63	65	65
<b>Citizens' use of eGovernment services, last 12 months</b> – all individuals (in % of individuals)	46	48	49	52
<b>Enterprises selling online</b> – large enterprises (in % of enterprises)	38	38	39	38
<b>Enterprises selling online</b> – SMEs (10-249 persons employed) (in % of enterprises)	16	17	17	17
<b>Turnover from eCommerce</b> – large enterprises (in % of turnover)	24	22	26	24
<b>Turnover from eCommerce</b> – SMEs (10-249 persons employed) (in % of turnover)	9	9	10	10
<b>Cross-border eCommerce</b> – all individuals (in % of individuals)	16	18	19	21
<b>Persons employed using computers at work</b> – all enterprises (in % of total employment)	49	50	51	54
<b>Seeking health information</b> – all individuals (in % of Internet users, last 3 months)	58	59	61	60

Source: author's own elaboration based on [European Commission 2019b].

- more than €14 billion under the European Structural and Investment Funds is being invested in digital technologies,
- €1 billion is being invested to build a world-class European supercomputer infrastructure,
- roaming charges ended in June 2017,
- in December 2018, the new rules against unjustified geo-blocking were implemented.

Table 4 presents the recent evolution of the European Union on selected indicators of the European information society and digital economy. Access to the Internet, both by enterprises and households in the European Union, is relatively good. Year by year, Europeans are also increasingly using the Internet. In the same period, much worse indicators were recorded in the field of e-commerce.

## 4. Discussion

The Digital Single Market should mean a harmonized and integrated market without barriers hindering the use of digital and online technologies and services, encouraging cross-border online trade, and encouraging investment in new online services and applications and in digital infrastructure, where people have a high level of e-skills and e-readiness [Copenhagen Economics 2010].

D. Ježová [2017, p.101] notes that establishing a Digital Single Market is a difficult goal, however after reaching it the European Union will be able to use its potential in the digital world. The benefits of the establishment of the Digital Single Market will be observed in all areas of life (e.g. technology, medicine, research, education, etc.) [Ježová 2017]. The DSM is “a new stage in a deepening and expanding single market” and it will contribute more “to the process of economic and European unification” [Lucian 2018, p. 75]. Moreover, P. Lucian emphasises that “the free movement of information should be considered the fifth fundamental freedom of the single market” [Lucian 2018, p. 75].

On the other hand, F. Erixon and P. Lamprecht [2018, p. 9] note that “the steps taken to create the DSM should focus on deregulation rather than on creating new regulation.” One interesting example is the General Data Protection Regulation (GDPR), which ushered a single set of rules on e-privacy, however the fact that companies need to appoint a data protection officer may prove burdensome for smaller businesses [Erixon, Lamprecht 2018].

It is worth noting that the development in the field of digitisation also implies cyber threats. According to estimates, cyber-attacks cost the world economy EUR 400 billion a year. Moreover 87% of Europeans see cyber-crime as a major challenge for the EU’s internal security. The scale of the problem is also evidenced by the fact that the fight against organised crime in the field of cyber-crime has been identified

as one of the ten priorities for 2018-2021 in the EU. Therefore the development of the DSM cannot be seen mainly in the aspect of trade facilitation and legal regulations, but also of supporting citizens' trust in the use of new technologies as well. One of the last actions taken was the adoption by the Council of a regulation called the Cybersecurity Act (April 2019), which introduced a system of EU-wide certification schemes and an EU cyber security agency [European Council 2019].

In recent years many activities have been undertaken to create the DSM. It would seem that the development of information and communication technologies is one of the main factors affecting today's economic growth. Referring to the above considerations, several important implications for digital policy and the development of the DSM in the European Union are worth noting:

- Further development of the DSM is desirable, however the greatest difficulty results from the necessity to take simultaneous actions in many areas, including investment in the infrastructure (e.g. Connectivity, European Cloud), digital skills, digitisation of industry, modernising public services, and digital innovation (e.g. digital health). Not all Europeans have sufficient digital skills. The demand for fast and ultrafast broadband is on the rise and is expected to further increase over the years in view of the growing sophistication of internet services and business needs [European Commission 2019c].
- E-commerce is growing slowly. However, it is important that e-commerce should be seen as part of traditional trade on the European internal market. Therefore e-commerce requires not only the implementation of legal regulations, but also monitoring. The International Monetary Fund (IMF) notes that "the rapid pace of change has led to concerns about the possible under-measurement of economic activity and economic welfare associated with digital products" [IMF 2018, p. 6].
- The growing importance of data and information flows raises important challenges for digital policy and the DSM development, especially in the area of data economy and cybersecurity. In this context, it is also important to provide a balance between privacy measures and companies' access to data. During the European Business Summit (EBS), it was noted that "digital economy means understanding today's position in the context of potential future growth. Economies, industries and governments must create the right environment to drive success" [European Business Summit 2016, p. 15]. In the digital revolution, ICT development is extremely dynamic, which is why a particularly important challenge for the EU is to use the potential of these technologies for development and to achieve economies of scale as well as economic growth.

## 5. Conclusions

The Digital Single Market is a response to contemporary changes resulting from the digital revolution, digitalization, and the development of ICT, as well as the needs reported by consumers and enterprises. The development of the idea of the Digital Single Market is desirable in the aspect of both strengthening European economic integration and supporting economic growth. The measures taken so far are not sufficient and its further development raises many challenges.

A further step in the research could be to discuss the development of the Digital Single Market in the aspect of the development of digital economies, in particular in the member states of the European Union.

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