

ASEJ

Scientific Journal

Bielsko-Biala School of Finance and Law

Volume 25 | Number 4 | December 2021

ISSN2543-9103
eISSN2543-411X
www.asej.eu



Bielsko-Biala

Bielsko-Biala School of Finance and Law
Wyższa Szkoła Finansów i Prawa w Bielsku-Białej

Scientific Journal
Zeszyty Naukowe

Academic Quarterly Publication
Vol 25, No 4 (2021)

Bielsko-Biala 2021

Digitisation As A Tool For Developing Social Capital

Aleksander Sapiński, Zbigniew Małodobry² and Robert Sito³

¹Bielsko-Biala School of Finance and Law
Poland

²Podhale State Higher Vocational School in Nowy Targ (PPWSZ)
Poland

³Constantine the Philosopher University in Nitra
Slovakia]

Abstract— [The modern world has already taken the first step towards a completely new technological, economic and social reality. However, the challenges facing modern industrial society are difficult to overestimate. It is a matter of changing the global socio-technological way of life, the consequence of which is the complete reformatting of habitual systems, the creation of new social and economic strategies. At the same time the technological paradigm is shifting, management models and social norms are changing, and large-scale demographic changes are taking place. The purpose of this article is to present the importance of the process of digitization of the economy as an important tool to ensure the development of social capital in the state and the company. The data presented in the article are based on the analysis of leading coefficients related to the topics presented in the article.

The article presents how important digitalization is for ensuring economic security from the point of view of developing the digital integration of social capital.]

Keywords— [social capital, digitalization, digital economy, economic security]

I. INTRODUCTION []

[The term VUKA (Volatility - Volatility ; Uncertainty - Uncertainty; Complexity - Komplety; Ambiguity - Ambiguity) is often used to describe the contemporary global institutional environment (Bennet, Lemoine 2014 p.2). One reason for this is the changes of importance in technology, including the rapid proliferation of the Internet, social networks and digital technologies. The latter are significantly changing society and the national economy in general. Therefore, it becomes important to study the directions of social capital

transformation under the influence of the digitalization of the economy, to identify the transformational factors and new economic opportunities that arise as a result of this impact.

During the critical analysis of the data sources special attention should be paid to the works of such authors as: P. Bourdieu, J. Coleman, R. Putnam, F. Fukuyama and others are devoted to the study of social capital - its identification, importance and directions of development and exploitation. Some aspects of the formation of social capital in Poland have been revealed in well-known works: J. Działek, M. Gajowiak, P. Swianiewicz, P. Sztompka or K. Janec. However, according to the author, the problems of social capital transformation in the context of the digitalisation of the economy and the spread of social networks remain insufficiently revealed. The aim of the article is to analyse the impact of digitalisation through the use of social media on the development and thus also on the security of social capital.

II. PRESENTATION OF THE MAIN MATERIAL.

The emergence from the current turbulent conditions to sustainable growth trajectories is accompanied by extraordinary challenges for countries that have not provided timely technological, economic and political conditions for new changes that can ensure broadly understood development. The current stage of development of many countries, including Poland, is connected with inevitability of finding and transition to a new model of economic development. This model should be based on the use of the intellectual and creative potential of human personality. To ensure that a given country, and indeed society, does not take last place in the global digital economy,



particular attention should be paid to the country's potential in terms of production, innovation and employment. Today's economic climate underlines the need to invest in digital transformation, as emerging markets seek to increase demand for technology to drive further growth and developed markets seek new ways to reduce costs and innovate. This is a prerequisite for the creation of a "circle of caution and growth": digital technology drives consumer demand and income, education and training, and the efficient use of capital and resources, leading to the securing of steady and secure economic growth, especially in emerging markets (ec.europa.eu).

In the classical sense, the "digital economy" is an activity in which the key factors (means) of production are digital data and their use, which can significantly increase efficiency/productivity in various economic activities. "Digital economy" is also called economy using digital technologies and services (www.ida.gov.sg). Today, the digital economy is developing rapidly on a global scale. It is the most important driver of innovation, competitiveness and economic growth in the world. According to the European Commission, the digital economy in the G20 is estimated at €3.2 trillion and already accounts for around 8% of GDP, stimulating growth and job creation. Furthermore, more than 75% of the value added created online belongs to traditional industries, which is associated with higher productivity (ec.europa.eu). Currently, the Digital Single Market (DSM) strategy is being successfully implemented in Europe. According to European experts, the DSM could bring an additional €415 billion per year to a united Europe and create hundreds of thousands of jobs. The DSM is seen as Europe's main asset to adapt the European society, business environment to the new conditions for doing business internationally. Europeans aim to ensure the effective development of various economic sectors that use digital

technologies to innovate in order to remain globally competitive (eurlex.europa.eu).

The need to harness the potential of digital technologies to enhance competitiveness, entrepreneurship and innovation is highlighted in the Entrepreneurship 2020 Action Plan (ec.europa.eu/enterprise/policies/sme/entrepreneurship-2020/index_en.htm). The European Commission encourages benefiting from the digital revolution by encouraging innovative business transformations and supporting digital enterprises in Europe (www.keepeek.com).

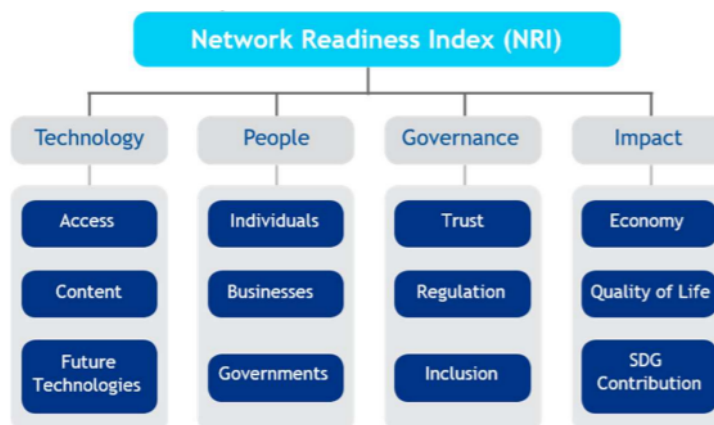
International indicators are used to assess the development of the digitalisation of the economy, namely:

1. the Digital Evolution Index (DEI);
2. the World Digital Competitiveness Index (WDCI);
3. Digital Economy and Society Index (DESI);
4. Digital Economy Index (BCG);
5. the network readiness index (PIB).

The Digital Economy and Society Development Index (DESI), which includes the following components: social capital; human capital; level of Internet use; digital inclusion; digital public services (ec.europa.eu/digital-single-market/en/desi), can be a reference point for analysing the relationship between social development and the level of digitisation.

The Network Readiness Index (NRI), one of the world's leading indicators, reflects the use and impact of information and communication technologies (ICT) in economies around the world. The latest version of the NRI report for 2020 reflects the network readiness landscape of 134 economies based on an assessment of their contribution in four different areas: technology, people, governance and impact. Each of these categories is made up of three subgroups (Figure 1), which cover a total of 60 variables.

FIGURE 1 STRUCTURE OF THE NETWORK READINESS INDEX

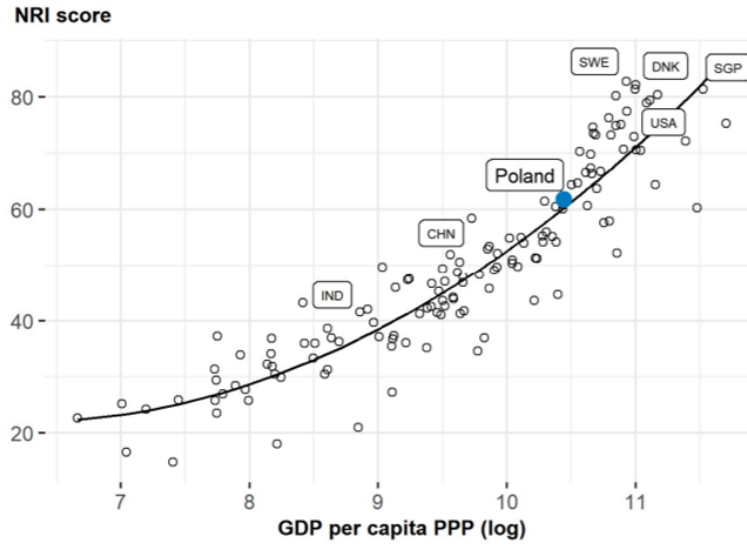


Sourcenetworkreadinessindex.org

Figure 2 shows Poland's position on both the NRI and GDP per capita (PPP) scales. The trend line shows the expected NRI score, given the level of economic income. As can be seen,

Poland is slightly above the trend line, which reflects its actual level of network readiness.

FIGURE 2 DEPENDENCE OF THE LEVEL OF THE NETWORK READINESS INDEX (NRI) ON GDP PER CAPITA



Source:workreadinessindex.org

"Digitisation" of business and industry is the core of the "digital" economy and the main driver of growth, including "digital" industry. "Digital" technologies are needed to increase the efficiency of Polish industry, and in some sectors they are becoming the basis of product and production strategies. Their transformative power is changing traditional business models, production chains and creating new products and innovations (www.itu.int).

The analysis of literature sources (Kochuma, Rudenko 2020 p. 17) and own research indicate that the main driver of the digital economy is human capital, because the knowledge, talents, skills, abilities, experience and intelligence of people to use modern digital technologies is the starting point of the digitalization process. In terms of the national economy, human capital is considered in three key aspects:

1. the level of digital competence of employees, determining their readiness to use digital technologies and new opportunities based on innovation;
2. the availability of appropriate highly qualified professionals and the training (retraining) of

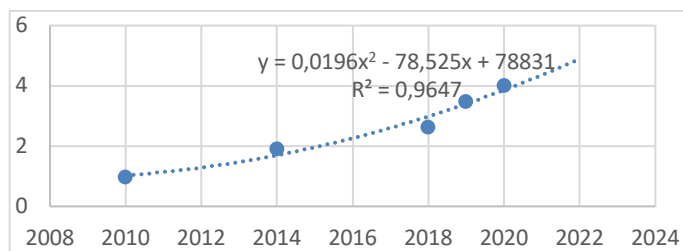
employees with regard to new requirements and applications, proficient in digital skills, able to learn independently and solve complex problems in the face of rapid technological change;

3. the presence of professionals capable of carrying out high-quality technical experimentation and research into the possibility of introducing specific digital tools into the practice of businesses in order to rationalise their use within a given economic entity.

Nowadays, the issue of using social media as the main means of communication in the digital world is becoming topical. These are mainly social networks on the Internet: on the one hand, the number of users is constantly growing (which is particularly evident in today's socio-economic environment) and, on the other hand, the influence of online social media on various types of economic and business processes is increasing.

Figure 3 shows the dynamics of the number of active users of some of the most popular social networks and social media (with social networking elements) from 2010 to 2020. The projected value indicates an increase in activity to 5 billion users in 2022.

FIGURE 3: DYNAMICS OF THE NUMBER OF ACTIVE SOCIAL NETWORK AND SOCIAL MEDIA USERS WORLDWIDE (BILLION PEOPLE).



Source: own compilation based on DIGITAL TRENDS REPORTS 2021 www.itu.int.

An analysis of the dynamics of change presented in the Digitalisation Quarterly Reports for 2020-2021 (datareportal.com) shows that with the global population growing by 0.5%, the number of unique mobile phone users is increasing, meaning that more than two-thirds of the world's population now own mobile phones. The internet is growing worldwide, with the number of internet users now accounting for over 60% of the global population. The total number of users of social media platforms has reached 4.33 billion. Thus, over the past year, the number of Internet users worldwide has increased by more than 336 million, reaching a total of more than 4.7 billion people.

Social networks continue to be a key driver of wider internet adoption. A recent GWI survey shows that nearly 99% of global internet users aged 16 to 64 use a social network or online messaging platform on a monthly basis.

The highest number of active social network users is found in East Asia (71% of the population), North America (69%) and Northern Europe (67%) (ec.europa.eu/digital-single-market/en/desi). In April 2021, the top five most popular user social networks were: WhatsApp - 24.1%; Facebook - 21.8%; Instagram - 18.4%; Twitter - 4.8%; FB Messenger - 3.6%; Tik Tok - 3.4%. Line and Telegram scored 2.4%.

It should be noted that the Internet as a whole creates the conditions for a peer-to-peer (P2P) economy and equality of actors, as users can receive information and interact on a more equal basis compared to traditional relationships. This creates new varieties and modes of social interaction that influence socio-economic indicators and outcomes. Social capital, due to the strengthening of relationships and interdependence in the context of increased innovation and digitisation of the economy and online interactions, takes on new properties and can have a significant impact on socio-economic development.

Thus, the above socio-economic phenomenon through the creation and implementation of links in the virtual environment influences real processes and phenomena (it is the link between online and offline activities). Thus, together with social capital in general (Kochuma, Rudenko 2020 p. 16), it becomes important to study digital social capital (the key component in particular is online social capital or online social capital). Digital capital - a type of capital that connects the virtual and real spheres, i.e. the accumulation of digital competences (information, communication, security, content creation and problem solving) and digital technologies; it is thus a set of "acquired skills and readiness", i.e. "internal resources" (digital competences) and "external resources" (digital technologies) (cppc.gov.pl) which can be collected, transferred and used. The specificity of digital social capital lies in organisational and economic relations between socio-economic actors, which bring socio-economic benefits (in the form of, for example, direct or indirect profits) by saving transaction and transformation costs, providing access to various types of resources, goods and values (including information) based on digital technologies (both online and offline), ensuring the creation of socio-economic networks at the level of society, social groups and individuals (Zhukovskaya 2019 p. 587).

An important feature of modernity is the rapid growth of the

digital divide (eurlex.europa.eu), which is due to unequal access of users from different countries of the world, social groups to online resources, which creates the danger of growing underdevelopment in developing countries. This applies above all to the national economy. For each country, the production sector and maintaining its own technological level is a strategically important national task for the development of the economy, services and ensuring the growth of income and national prosperity. The digital gap problem manifests itself as an inequality of actors at three different levels:

1. availability and quality of Internet access,
2. online tools (qualitative aspects of access to online resources: motivation, opportunities, skills of the respondents, etc.)
3. social, economic, cultural, etc. benefits/results obtained from the use of Internet resources.

It should be noted that nowadays, with the development of ICTs, the focus has shifted towards the second and third levels of the digital divide. It is in the third, the most advanced one, that digital capital is created, among other things, on the basis of social capital (eurlex.europa.eu), the latter can be relevant at all three levels of digital divide, and digital capital in turn, affects the quality and number of online relationships, and on this basis, social, cultural and economic capital.

The main reasons for differences in the qualitative and quantitative use of social networks can be divided into technical and economic levels of ICT (information and computer technology, economic development, scale of socio-economic factors) and socio-economic: e.g. population (young people use social networks), cultural and historical characteristics, traditions of social participation, human and social capital.

The most important types of social capital include:

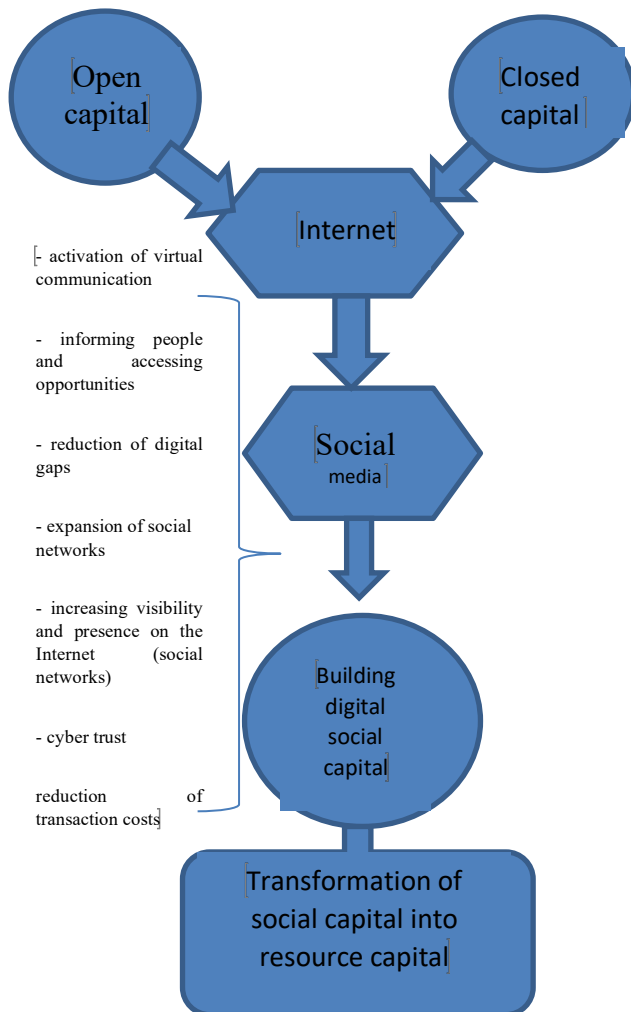
1. open (wide social networks, heterogeneous groups),
2. closed (narrow radius of trust, homogeneous groups),
3. connective (interaction with government agencies)
4. civic capital (people have a sense of commitment to issues and personal responsibility for the state of affairs in society) (Larsen, et al. 2004 p. 64-70).

The division of social capital into open and closed correlates with the concept of soft ties and strong ties (Zhukovskaya 2019) and can also be considered in conjunction with the online environment.

Today, it is important to use a comprehensive approach to study the relationship between social capital and social networks. However, it is necessary to identify not only quantitative but also qualitative aspects of social capital in online social communication: conditions for increasing digital social capital are being created in the new crisis. However, it is the qualitative and quantitative characteristics of already accumulated social capital (e.g. trust, openness, civic culture, etc.) that determine the effectiveness, accessibility and features of interaction in the context of social media. Contemporary conditions may therefore open up new opportunities for the development, accumulation and use of social capital, primarily digital, as a socio-economic resource (including as a tool for reducing transaction costs and increasing welfare) based on

social networks. It is important to bear in mind that, on the one hand, social network interaction can contribute to the growth of certain types of social capital and general equality, while on the

FIGURE 4: MODELLING THE PROCESS OF TRANSFORMATION OF SOCIAL CAPITAL INTO RESOURCE CAPITAL UNDER THE INFLUENCE OF DIGITAL FACTORS



Source authors own elaboration.

other hand, there will still be inequalities not only in the real world but also in the virtual world, leading to certain consequences at all three levels of digital exclusion (e.g. different perceptions and processing of the same information, as well as the use of benefits), which in fact preserves inequality. Furthermore, it can be noted that the realisation of social capital is important for both formal and informal communities, as well as the fact that, depending on the tasks, it is necessary to use different social networks, which nowadays form a global ecosystem (with characteristics of openness, self-organisation, self-development, as well as self-regulation).

The contemporary characteristics of social capital in relation to the digitalisation of the economy can be traced in the context of several main areas:

1. virtual communication creating strong ties: the Internet is a platform for building trust, sharing

knowledge and uniting people with common goals and interests, thus building a "virtual community" in the context of digital capital;

2. weak ties: based on informing people and accessing opportunities, thus the accumulation of open social capital (i.e. relationship capital and the utilitarian nature of relationships are important);
3. expansion of social networks: The Internet creates platforms in the form of social media that provide users with opportunities to realise existing closed-type social capital, as well as to gain new connections;
4. increasing visibility and presence: The Internet (social networks) enables increased social participation, increased trust, constant interaction with a wide range of audiences;
5. knowledge and trust: yes, for the development of ICTs it is necessary to increase trust in the Internet (cyber trust), with a concomitant increase in trust in technology, as well as in information presented online; in addition, an additional element appears between interacting actors - trust in the electronic environment (e.g. in the provision of personal data, money transfers, etc.). Thus, the importance of online social networks is growing as an important aspect of social capital formation in contemporary conditions (Figure 4).

Social capital as a tool for self-organisation and welfare growth is of increasing importance. On this basis, in the context of identifying and isolating sources of formation and effects of impact, we can identify digital social capital, which is largely shaped by online social media and networks due to its low hierarchy, ability to build many weak high quality links, including solving professional problems, but it is the offline realisation of this socio-economic phenomenon that is of great importance. Thus, in general, the boundaries between open and closed social capital (including between personal and professional spheres), as well as online and offline environments, are blurred. However, it is important to remember that the Internet, and in particular social networks, contribute to the growth of open social capital and its gradual transformation into resource capital.

III. CONCLUSIONS AND PERSPECTIVES FOR FURTHER RESEARCH.

The spread of the Internet and the digitalisation of the economy have significantly changed the institutional landscape of the global and national economy. As a result, favorable conditions have been created for the emergence of new organizational forms of social capital, including - virtual social networks and beyond.

In today's transformational environment, new ways of accumulating and using social capital are emerging, which should be considered not only in the context of increasing trust, strengthening social ties, networking and lowering transaction costs, but above all online social interaction. At the same time, given the dualistic nature of the Internet, the notion of the digital

divide, ICTs and the digitisation of the economy, online social media and social networks are gaining importance, including as mechanisms for the accumulation and transformation of social capital into digital capital.

The need to maximize the positive effect of transformation processes requires state intervention in the process of shaping modern directions of development and functioning of the digital economy. It is advisable to consider these directions in three aspects:

1. improvement of institutional support of informatization and digitalization processes, regulatory support of these processes and development of state policy on global digital platforms (online social media and social networks);
2. introducing ways of rapid development of digital industries and business (technologies throughout the country and stimulating the economy by attracting investment capital),
3. increasing digital inclusion (equal access of all segments of society to digital technologies and opportunities and promoting digital skills among the population).

IV. REFERENCES

- A Digital Agenda for Europe // Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Brussels, 19.5.2010, COM(2010)245 final. URL: [http://eurlex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52010DC0245R\(01\)&from=EN](http://eurlex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52010DC0245R(01)&from=EN)
- Bonding and bridging: understanding the relationship between social capital and civic action / L. Larsen [et al.] // J. of Planning Education a. Research. – 2004. – Vol. 24, № 1. – P. 64–77.
- DIGITAL TRENDS REPORTS 2021. URL: <https://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC21/Pages/RPM/Digital-Trends-Reports-2021.aspx>
- DIGITAL 2021 APRIL GLOBAL STATSHOT REPORT <https://datareportal.com/reports/digital-2021-april-global-statshot>
- Długookresowa Strategia Rozwoju Kraju Polska 2030 Ministerstwo Administracji i Cyfryzacji Warszawa, 11 stycznia 2013 r. Dostępny. URL: http://kigeit.org.pl/FTP/PR-CIP/Literatura/002_Strategia_DSRK_PL2030_RM.pdf
- Digital economy . URL: http://ec.europa.eu/growth/sectors/digital-economy/importance/index_en.htm.
- Digital Single Market Mid-term Review: Commission calls for swift adoption of key proposals and maps out challenges ahead URL: <https://ec.europa.eu/digital-single-market/en/news/digital-single-market-mid-term-review>
- Zhukovskaya, O. Social capital in the era of the Internet / O. Zhukovskaya // Тенденции экономического развития в XXI веке: мат. Межд. науч. конф. (28 февраля 2019 г., г. Минск) / Белорусский государственный университет. – Минск: Право и экономика, 2019. – 598 с. – С. 584–586
- ICT Development Index (2017). IDI 2017 rank. URL: <https://www.itu.int/net4/ITU-D/idi/2017/index.html> .
- EC. The Digital Economy and Society Index (DESI). URL: <https://ec.europa.eu/digital-single-market/en/desi>
- The Fletcher School at Tufts University & Mastercard. (2017). The Digital Evolution Index (DEI 2017) URL: https://globalrisk.mastercard.com/wp-content/uploads/2017/07/Mastercard_DigitalTrust_PDFPrint_FINAL_AG.pdf
- Kochuma I., Rudenko M. Determinants of social policy in the formation of the human development institutional environment: management aspect. Financial space. 2020. № 4 (40). P. 9–22.
- Analiza strategii i działań mających na celu rozwój kompetencji cyfrowych w państwach Unii Europejskiej. Alek Tarkowski, Ewa Majdecka, Zofia Penza-Gabler, Marta Sienkiewicz, Grzegorz D. Stunża Fundacja Centrum Cyfrowe na zlecenie Centrum Projektów Polska Cyfrowa. URL: https://cppc.gov.pl/images/Analiza_strategii_i_dzialan_majacych_na_celu_rozwoj_kompetencji_cyfrowych_w_panstwach_Unii_Eu-ropejskiej.pdf
- Number of social network users worldwide from 2017 to 2025 (in billions). URL: <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users>.
- Most popular social networks worldwide as of July 2020, ranked by number of active users (in millions) // Statista. URL: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/>.
- The Entrepreneurship 2020 Action Plan. URL: http://ec.europa.eu/enterprise/policies/sme/entrepreneurship-2020/index_en.htm.
- Measuring the Digital Economy OECD Report . URL: http://www.keeepeek.com/Digital-Asset-Management/oced/science-and-technology /measuring-the-digital economy/summary/english_1443d3d7-en#page1.
- New Digital Economy .URL: <https://www.ida.gov.sg/~media/Files/Infocomm%20Landscape/Technology/TechnologyRoadmap/NewDigitalEconomy.pdf>.
- OECD Digital Economy Papers. URL: http://www.oecd-ilibrary.org/science-and-technology/oecd-digital-economy-papers_20716826
- WIPO (2020). World intellectual property organization. URL: <https://www.wipo.int/portal/en>
- Network Readiness Index 2020 Poland. URL: <https://networkreadinessindex.org/wp-content/uploads/2020/12/Poland.pdf>]

WSFiP conducts research and educates students in the following fields:

Finance and Accounting

- Treasure Administration
- Banking
- Corporate Finance
- Accountancy
- Accounting and Finance in Public Sector Institutions
- Corporate Accounting and Controlling
- Audit
- Management and Finance in Real Estate

Cyberspace and Social Communication

- Communication and Image Creations
- Safety in the Cyberspace

Internal Security

- Administration and Management in Security
- Security and Public Order
- Security and Development in Euro-region
- Security of Information and Information Systems
- Security in Business
- Criminology and Investigative Studies
- Criminology and Forensics
- Protection of People and Property
- Public Order Agencies

Law

- this program gives strong legal foundations to undertake further professional training for judges, prosecutors, attorneys, notaries, bailiffs.

Administration

- Fiscal Administration
- Local Government Administration

Logistics

- this program gives good preparation for work in logistics companies as well as in other economic and administrative units.

Information Technology

- Databases and Net Systems
- Computer Graphics and Multimedia Techniques
- Design of Applications for Mobile Devices
- IT Services in Public Administration Units

Postgraduate courses

- Administrative studies
- Fiscal Administration
- Law and management in health service