



## SELECTED BENEFITS AND THREATS ARISING FROM INTERNET USE BY HOUSEHOLDS AND ENTERPRISES IN POLAND WITH RESPECT TO THE COVID-19 PANDEMIC

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### Abstract

The internet has revolutionised the world over the past half of a century, and the COVID-19 pandemic has contributed to an increase in its importance. Although the global network brings with it more advantages than disadvantages, its existence also causes certain threats which have an impact on the life of Polish households and operations of Polish enterprises. This paper is theoretical and empirical in nature. Its aim is to explore the relationship between the internet and the COVID-19 pandemic, i.e. the time household members spend online. The impact of the two factors on survival in the market was examined in the case of enterprises. Moreover, the subjectively most important benefits and threats arising from the global network consumption in the opinion of the business entities mentioned above were illustrated. According to the respondents, facilitating communication is the main advantage of the internet (33.33%), whereas the spreading of hate on the internet is the major threat associated with its use (24.17%). The main benefit derived from the global network resources by enterprises is the possibility of obtaining raw materials from the most profitable sources (28.40%), whereas the major threat identified by them is that a negative opinion published on the internet can weaken the financial standing of a company or even make it disappear from the market (55.56%). Nearly 60% of household members found themselves spending

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more time online during the COVID-19 pandemic. Nearly 94% of the entrepreneurs who use the internet in running their businesses admitted that it helped them to keep their business in the market during the pandemic.

**WYBRANE KORZYŚCI I ZAGROŻENIA WYNIKAJĄCE  
Z UŻYTKOWANIA INTERNETU PRZEZ POLSKIE GOSPODARSTWA DOMOWE  
I PRZEDSIĘBIORSTWA W ASPEKCIE PANDEMII COVID-19**

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**Abstrakt**

Internet niemal w pół wieku zrewolucjonizował świat, a pandemia Covid-19 przyczyniła się do jeszcze większego wzrostu jego znaczenia. Z istnieniem sieci globalnej wiąże się zdecydowanie więcej zalet niż wad, niesie ona jednak również pewne zagrożenia, w znacznym stopniu oddziałujące na życie polskich gospodarstw domowych i funkcjonowanie przedsiębiorstw. Artykuł ma charakter teoretyczno-empiryczny. Jego celem jest poznanie zależności między Internetem a pandemią Covid-19, tj. czasem spędzonym w sieci w przypadku polskich gospodarstw domowych, natomiast w kwestii przedsiębiorstw – wpływu tych dwóch czynników na utrzymanie się firm na rynku. Ponadto subiektywnie zobrazowano najistotniejsze korzyści i zagrożenia wynikające z konsumpcji sieci globalnej w opinii podmiotów gospodarczych. Zdaniem ankietowanych wiodącą zaletą Internetu jest ułatwienie komunikacji (33,33%), a nadrzędne zagrożenie stanowi upowszechnienie się hejtu (24,17%). Zasadniczą korzyścią, jaką czerpią przedsiębiorstwa dzięki zasobom sieci globalnej, okazała się możliwość pozyskiwania surowców z najbardziej opłacalnych dla nich źródeł (28,40%), a za najpoważniejsze zagrożenie przedsiębiorcy wskazali to, że negatywna opinia opublikowana w sieci może osłabić kondycję finansową firmy lub nawet doprowadzić do jej zniknięcia z rynku (55,56%). Blisko 60% przedstawicieli gospodarstw domowych pod wpływem pandemii Covid-19 zaobserwowało u siebie wzrost czasu spędzanego w sieci. Prawie 94% przedsiębiorców korzystających w prowadzeniu swojej firmy z Internetu przyznało, że miał on wpływ na utrzymanie się ich firm na rynku w dobie pandemii.

## Introduction

The invention of the internet began the information revolution. The rapid development of technology and a convergence of data processing methods resulted in the electronic economy, accompanied by the economic processes in the virtual network, which resulted in such new concepts as e-trade, e-marketing, e-education, and e-administration (Flaga-Gieruszyński *et al.*, 2017, p. 5). The evolution of these new concepts has brought about many new changes in Poland and around the globe.

The real world then started to move to the virtual world. The propagation of internet resources has contributed to a range of socio-cultural changes (Tomin *et al.*, 2020, p. 5) and a revolution in the lifestyle of society, its mindset, ways of spending free time and transformations in enterprise operation. Although a considerable part of the society still regards the global network mainly as a source of entertainment, its importance is much greater, as the development of the resources has brought about a range of changes in the lives of two out of three types of economic participants – households and enterprises (Milewski & Kwiatkowski (Eds.), 2018, p. 30). This has contributed to a transformation of consumer behaviours, changes in enterprise productivity and marketing, the creation of virtual products, the modernisation of distribution methods, and the creation of new professions in the labour market; including innovative fields of study in Polish universities.

In 2004, 26% of Polish households had access to the internet, with every third household having this privilege in 2006 (*Spółeczeństwo informacyjne w Polsce...*, 2008, p. 118), and 90.4% in 2020 (*Spółeczeństwo informacyjne w Polsce...*, 2020, p. 132). This increase was not as great in the case of enterprises, as 89% had access to the internet in 2006 (*Spółeczeństwo informacyjne w Polsce...*, 2008, p. 63), and over 98% of them had access to broadband internet in 2020 (*Spółeczeństwo informacyjne w Polsce...*, 2020, p. 77). However, the use of internet resources and their potential in organisational development has changed dramatically, and the digital transformation has accelerated during the COVID-19 pandemic.

### The study methodology and characteristics of the study populations

The objective of this study was to identify the relationship between the global network and the COVID-19 pandemic, i.e. the time spent on the internet by Polish household members, and the effect of these factors on Polish enterprise survival in the market. An opinion was also acquired from two business entities on the greatest internet benefits and threats resulting from its use.

The empirically applied descriptive study (Apanowicz, 2002, p. 33-37) was conducted by means of an online survey in August 2020. The study included 120 members of Polish households and 100 entrepreneurs. The respondents belonged to various age groups. The factors taken into account included the place of residence, sex, education, professional status and the monthly net income. Regarding the enterprises, the type of business activity with respect to its size was taken into account.

### **The impact of COVID-19 on the time spent on the internet by members of Polish households**

The emergence of the global network has revolutionised the world, with a consequent range of changes in the sphere of human lives (Królewski & Sala, 2016, p. 39). Nowadays, even a short interruption in internet access is a cause for concern. This study has shown that 111 people (92.50%) of the examined population profited from the internet on a daily basis and the pandemic affected the time of network use (Fig. 1). In the opinion of nearly 60% of the respondents (59.17% – 71 people), their activity in this regard has increased. This was probably a consequence of the restrictions, such as those concerning meeting family and friends and shutting down entertainment facilities, which resulted in more time being spent at home. This activity was decreased only in the case of 5.00% of the respondents (six people), whereas a little more than one out of four household members (26.67% – 32 people) said that they had not noticed any change in the amount of time spent on the global network. The other individuals (9.17% – 11 people) could not identify a correlation between the COVID-19 pandemic and the time spent on the Internet.

The internet is addictive. The specialist literature under analysis distinguishes six phases of the evolution of this threat: fascination, discomfort reduction, regulation of emotional states, disorientation of human contacts, discomfort resulting from lack of network access and the phase of emerging personal adversities arising from the pathological use of the medium (Panasiuk & Panasiuk, 2017, p. 68-70). Warning signs of internet addiction include regular network consumption at the expense of other interests or of meetings with peers, signs of aggression if access to the global network proves impossible and not caring about relations with one's family or friends (Woronowicz, 2009, p. 476). Up to 73.33% of the Polish household members (88 people) taking part in the study confirmed that they could abstain from consuming network resources for several days at the most, with such time not exceeding several hours in the case of 15% of the study population (18 people).

The coronavirus pandemic changed the frequency of online shopping by Polish households. A little over half of the respondents (50.83% – 61 people) reported

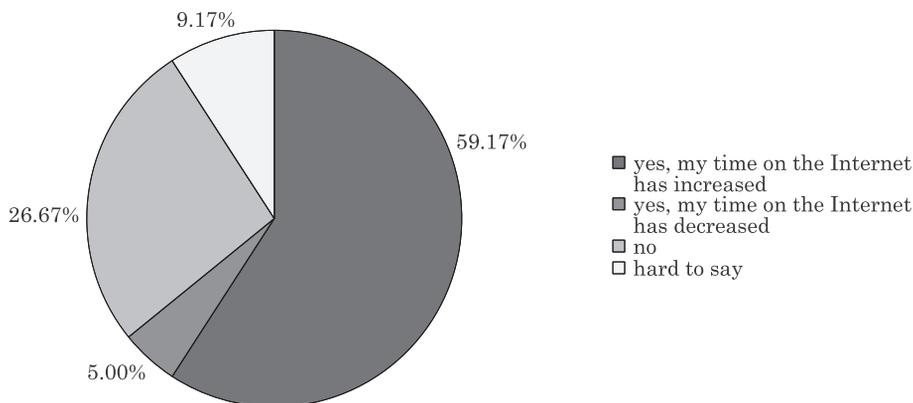


Fig. 1. Opinions of Polish household members on the effect of the COVID-19 pandemic on the time they spent on the Internet

Source: based on the author's studies.

doing such shopping more often, whereas 9.17% of the respondents (11 people) could not give a definitive answer to this question. The others (48 people) did not reduce their regular shopping compared to the time from before the pandemic. According to the report prepared by the International Group of Financial Reporting at KPMG, the largest increase in the frequency of online shopping by members of the Polish society is observed in food and medicines, followed by cosmetics (*Nowa rzeczywistość: konsument...*, 2020, p. 5). The shopping method is affected to the greatest extent by price, convenience and safety. According to studies, discounts and promotional offers have an advantage over a diverse product offer in the case of food shopping, whereas the opposite is true for non-food shopping (*Nowa rzeczywistość: konsument...*, 2020, p. 13).

The results show that members of the public use mobile phones to consume network resources because of their convenience and easy accessibility. This was the answer given by 94.17% of the respondents<sup>1</sup> (113 people). The group of household members that usually used a laptop to use the internet was nearly 20 p.p. lower (75.83% – 91 people). Further places are occupied by: a desktop computer (26.67% – 32 people), a tablet (20% – 24 people), a smartwatch (9.17% – 11 people) and a game console (8.33% – 10 people). Other responses included a TV set (8.33% – 10 people). An e-reader proved to be a niche device for internet use among the study population (3.33% – 4 people).

The appearance of the internet had a positive impact on the quality of life in Polish households – that opinion was expressed by 77.50% of the respondents (93 people). Less than 7% of the respondents (6.67% – 8 people) found the impact to be negative, whereas the others (15.83% – 19 people) could not decide whether it was positive or negative.

<sup>1</sup> A question in which more than one answer could be selected.

## **Benefits of internet use as seen by members of Polish households**

As the internet becomes increasingly common, geographical barriers are no longer important in quick information exchange, regardless of whether the exchange is interpersonal or uses voice only (Łysik & Machura, 2014, p. 15, 16). This study confirmed this because “facilitating communication” was mentioned by the respondents as the most easily observable benefit from internet use (33.33% – 40 people). All types of communicators, like Gadu-Gadu or Tlen several years ago, and Messenger or WhatsApp now, are helpful in this regard.

Social development is an essential part of growth, as it has an impact both on people’s competitive advantage in the labour market and on the companies they work for. The knowledge of the transforming socio-economic environment is of particular value (Kłos & Szura, 2013, p. 218, 219). Millennials, i.e. people born in the 1980s and 1990s, are the first generation which, owing to the internet, does not need intermediaries to improve their qualifications. Easy access to knowledge increases one’s chances for a better-paid job in future and for improvement of the quality of life (Kisiel, 2016, p. 89). A little more than 17% (17.50%) of household members (21 people) saw this advantage as supreme. There are internet websites where one can get certificates valued in the labour market, e.g. in online courses. Importantly, participation in many of them is free of charge. One of the examples based on the author’s own experience is the website of the Polish Agency for Enterprise Development, where one can participate in courses providing basic knowledge of marketing, law, management and finance.

Internet resources give society an opportunity to quickly acquire information from around the globe (15.83% – 19 people). A little over 8% of the respondents (8.33% – 10 people) see the global network mainly as a form of entertainment, e.g. by watching films. The same number of people are of the opinion that it enables their passions and interests to evolve. Other important benefits provided by the global network include the possibility of shopping from home (5.00% – 6 people), handling administrative affairs and online banking (3.33% – 4 people). Some answers also identified the internet as an opportunity for earning an additional income for the home budget, as a means for establishing new contacts, as a way of learning about people’s opinions on a product before its purchase, on a seller, and as a way of saving money owing to price comparison sites, e.g. ceneo.pl. According to some respondents, the significance of all the advantages is the same, or the internet is a source of knowledge with regards to doing something in a simple manner.

## **Threats arising from internet use in the opinion of Polish household members**

New information technologies are often a challenge for older generations, but for millennials they are an essential part of their lives. A presence in the network is a complement to the real world for them (Kisiel, 2016, p. 88). This carries with it some threats. According to the study findings, the spread of internet hate is the most common of them (24.17% – 29 people). Using the global network often has a negative impact on interpersonal relations (20% – 24 people). This is because millennials prefer sending text messages to communicating by voice. They sometimes even feel anxious before a telephone conversation and consider it too time-consuming.

Nearly every user can be the author of content published on the internet, which is why such information is not always true. For nearly 16% (15.83% – 19 people), this disadvantage was a major threat of the global network, and for 15% of the respondents (18 people), the problem was that not all information is verifiable and that it spreads rapidly, even if it is not true. It can have negative consequences on many levels, particularly when a person observes some disease symptoms and makes use of pseudo-expert advice available on the internet instead of seeing a real doctor. A little over 13% of the respondents (16 people) saw the risk of addiction as the supreme threat. Other disadvantages associated with the use of the global network included deterioration of one's health, especially one's eyesight (5% – 5 people), and a tendency to violate copyright laws (4.17% – 5 people). According to several respondents, publishing fake news deliberately and the time-consuming nature of using the internet were the most important threats, or all threats were equally dangerous.

## **The relationship between the internet, COVID-19 and the survival of Polish enterprises in the market**

Regardless of their size, the presence of enterprises on the internet facilitates consolidation of their competitive advantage and improves their market position, which is extremely important in the consumer market. They use all forms of internet marketing to reach all potential customers around the globe (Felipa, 2017, p. 41-47). Although the contemporary world is based on modern information technologies (Królewski & Sala, 2016, p. 39), nearly one-fifth of the entrepreneurs (19 people) taking part in this study admitted that they did not use the internet for their business activities. This may be a consequence of the fact that a considerable share of the respondents lived in small towns with a population of under 10 thousand, and the approach to operating a firm in such places differs from

that in big cities. Over 80% of the participants in a further part of the study<sup>2</sup> admitted that they used the internet at least once a week for purposes related to their business activities, and 48 people (59.26%) did it every day. The most frequently used devices were: a telephone (39.51% – 32 people), a laptop (37.04% – 30 people), a desktop computer (22.22% – 18 people) and a tablet (1.23%).

The coronavirus pandemic and the related restrictions brought about a demand shock felt by enterprises. Enterprises in some industries were forced to shut down temporarily. Others had to face a decrease in demand for their goods or services and, consequently, a decrease in financial liquidity (Klepacki, 2021, p. 7-21). As a countermeasure, 32% of the firms (in particular the trade and service sector) chose to intensify the use of digital platforms or even to start using them (*COVID-19 Business Pulse... 2020*, p. 11-16). It was confirmed in many industries that firms that did not operate on the internet were doomed to oblivion (Frackiewicz, 2006, p. 11). Up to 93.83% of the respondents (76 people) admitted that the internet helped their firms to survive in the market at that time, and, in consequence, they were then asked about the type of contribution (Tab. 1). It enabled a change in the form of contact with customers<sup>3</sup> (64.47% – 49 people), modification of the methods of sale of the goods or services on offer (57.89% – 44 people), advertising and promoting the business despite the fact that the firm was shut down (23.68% – 18 people), launching new products (30.26% – 23 people), or it facilitated switching to another industry (11.84% – 9 people).

Table 1

The impact of the internet on the survival of Polish enterprises in the market during the COVID-19 pandemic\*

Item	Number of answers	Percentage [%]
It facilitated a change in the form of contacts with customers	49	64.47
It facilitated a change in the method of sales of products/services on offer	44	57.89
The enterprise was shut down during the pandemic, but the internet facilitated its advertising and promotion	18	23.68
It facilitated quick development and launching new products (e.g. e-books, online courses)	23	30.26
It enabled quick switching to a different industry	9	11.84
Other	9	11.84

\* A question in which more than one answer could be selected.

Source: based on the author's studies.

<sup>2</sup> The remaining questions in the questionnaire were addressed to entrepreneurs using the internet in their business activities, which is why 81 people who gave a positive answer to this question accounted for 100% of the population regarding further questions.

<sup>3</sup> A question in which more than one answer could be selected.

Other answers were related to an increase in the demand for services of the firm, its development, change of the form of work or with creating this activity (11.84% – 9 people).

A little more than 90% of the entrepreneurs<sup>4</sup> (90.12%) were of the opinion that the global network made enterprise operation considerably easier. The other respondents were of different opinions or were unable to give a definitive answer.

### **Benefits of internet use as seen by Polish entrepreneurs**

Skilful use of the internet helps enterprises to accomplish their main objective – profit maximisation (Milewski & Kwiatkowski (Eds.), 2018, p. 30). The global network facilitates market research, identification of consumer needs and the target group, obtaining raw materials from the most profitable sources, addressing advertisements to potentially interested groups, observing the effectiveness of promotional campaigns and actions at the stage of developing an innovative product. Internet advertising is more cost-effective not only because it is cheaper but also because its target group can be identified more precisely (Felipa, 2017, p. 47). Internet resources facilitate measuring the effectiveness of advertising campaigns, for example with the click-through rate (CTR), conversion rate (CR) and the bounce rate (Mazurek (Eds.), 2018, p. 317, 318).

In the opinion of 23 of the respondents (28.40%<sup>5</sup>), the ability to obtain raw materials from the best sources is the supreme advantage of the internet. Easy enterprise promotion is nearly as beneficial (25.93% – 21 people), and it is followed by an ability to carry out an advertising campaign without large financial resources (4.94%). An offer from an advertising firm in the contemporary world is not sufficient. Winning potential customers' trust and building relations with them is an important element of effective marketing and internet resources are extremely helpful in this regard. Proper segmentation increases marketing effectiveness and brings profit to enterprises (Leiva & Kimber, 2020, p. 42). Product promotion by influencers is a particularly effective form of advertising (van Driel & Dumitrica, 2021, p. 68).

Sales of goods in such large amounts and on such a large scale (18.52% – 15 people), with potential customers being found around the world (12.35% – 10 people), was never possible before the global network became widespread. The other respondents saw a streamlining of communication with recipients and opportunities for acquiring knowledge essential for running a business as the most significant benefits from using internet resources.

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<sup>4</sup> A question addressed to the entrepreneurs (81) using the internet in their business activities.

<sup>5</sup> A question addressed to entrepreneurs (81) using the internet in their business activities.

## Threats posed by the internet in the opinion of Polish entrepreneurs

Creating the internet contributed to many changes in the nature of goods production and trade. It is estimated that the fourth industrial revolution that is currently taking place is going to bring even more changes in this regard, mainly through the development of the Internet of Things. It is also going to bring about an increase in its volume with a simultaneous cost decrease (Rymarczyk, 2021, p. 105, 106). The development and propagation of modern technologies are essential for global transformation (Stroiko *et al.*, 2021, p. 102, 103), but they also pose many threats to Polish enterprises.

The propagation of the global network is contributing to an increase in unfair competition practices. According to the study, one such activity was regarded as definitely the most serious threat arising from the existence of the internet. One should note that the respondents feared subjective negative opinions about their enterprises, because they could result in a loss of customers or even bring about the company's bankruptcy (55.56%<sup>6</sup> – 45 people). The spread of dumping (12.35% – 10 people), the growth of the “grey market” (6.17%) and more frequent copyright violations (4.94%) were regarded as less significant threats. According to the other respondents, internet use is not associated with any threats.

## Conclusions

Internet development has brought about many changes in all areas of human life and in the way that enterprises operate. The coronavirus pandemic has contributed to the acceleration of the digital revolution. This entails many benefits but also numerous threats. According to experts, this process is not going to slow down in the very near future. The following conclusions have been drawn from the experimental results:

1. According to 33.33% of the household members participating in the study, facilitation of communications is the major benefit of internet use. Entrepreneurs see an opportunity to acquire raw materials from the best sources as such a benefit (28.40%).

2. Polish households indicated the growing spread of internet hate as the greatest threat of the global network (24.17%). From the point of view of enterprises, it is definitely the fact that publishing a negative opinion, which may not be authentic, creates a risk of losing financial liquidity or may even force the firm to shut down (55.56%).

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<sup>6</sup> A question addressed to entrepreneurs (81) using the internet in their business activities.

3. In the opinion of 77.50% of the respondents, popularising the internet has had a positive impact on the quality of life in Polish households. A little more than 90% of the entrepreneurs admitted that the global network considerably helped the operation of their firms.

4. The COVID-19 pandemic contributed to an increase in the internet activity of over 59% of the Polish household members participating in the study. The frequency of online shopping also increased. For nearly 94% of entrepreneurs who used the global network in their business operations, it helped them to counteract the negative effects resulting from the pandemic-related restrictions, for example, by changing the methods of contacting customers (64.47%).

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## References

- Apanowicz, J. (2002). *Metodologia ogólna*. Gdynia: Wydawnictwo Diecezji Pelplińskiej „Bernardinum”.
- COVID-19 Business Pulse Survey – Polska. (2020). World Bank Group & PARP. Retrieved from <https://www.parp.gov.pl/component/publications/publication/covid-19-business-pulse-survey-polska> (18.05.2021).
- Driel, L. van, & Dumitrica, D. (2021). Selling brands Chile staying „Authentic”: The professionalization of Instagram influencers. *Convergence – The International Journal of Research into New Media Technologies*, 27(1), 66-84. <https://doi.org/10.1177/1354856520902136>.
- Felipa, P.B. (2017). Marketing + internet = e-commerce: oportunidades y desafíos. *Revista Finanzas y Política Económica*, 9(1), 41-56. <http://dx.doi.org/10.14718/revfinanzpolitecon.2017.9.1.3>.
- Fraćkiewicz, E. (2006). *Marketing internetowy*. Warszawa: Wydawnictwo Naukowe PWN.
- Kisiel, P. (2016). Millenials – nowy uczestnik życia społecznego? *Studia Socialia Cracoviensia*, 8(1), 83-94. <http://dx.doi.org/10.15633/ssc.1876>.
- Klepacki, B. (2021). *Kierunki oddziaływania pandemii Covid-19 na społeczną i ekonomiczną sytuację kraju z uwzględnieniem logistyki*. In T. Rokicki (Ed.). *Wybrane zagadnienia logistyki – poziom ogólny, transport, dystrybucja, łańcuchy dostaw, logistyka miejska*. Warszawa: SGGW.
- Kłos, A., & Szura, J. (2013). Szkolenia jako forma aktywizacji zawodowej bezrobotnych na przykładzie Powiatowego Urzędu Pracy w Jarosławiu. *Nierówności Społeczne a Wzrost Gospodarczy*, 34, 218-234. Retrieved from <http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.desklight-ea9c39a6-beb4-4712-8e23-43412842fb3d> (22.05.2021).
- Królewski, J., & Sala, K. (Eds.). (2016). *E-marketing. Współczesne trendy. Pakiet startowy*. Warszawa: Wydawnictwo Naukowe PWN.
- Leiva, R., & Kimber, D. (2020). Revisiting Consumer-Responses Models: Are Suitable for Post-Millennials? *Communication & Society*, 33(4), 33-45. <https://doi.org/10.15581/003.33.4.33-45>.
- Łysik, L., & Machura, P. (2014). Rola i znaczenie technologii mobilnych w codziennym życiu człowieka XXI wieku. *Media i Społeczeństwo. Medioznawstwo, komunikologia, semiologia, socjologia mediów*, 4, 15-26. Retrieved from <https://www.wir.ue.wroc.pl/info/article/WUT296e-820e0dd14886a9831dc7c4b61447/Rola+oraz+znaczenie+technologii+mobilnych+w+codziennym+%C5%BCyciu+cz%C5%82owieka+XXI+wieku> (18.05.2021).
- Mazurek, G. (Eds.). (2018). *E-marketing. Planowanie, narzędzia, praktyka*. Warszawa: Wydawnictwo POLTEXT.
- Milewski, R., & Kwiatkowski, E. (Eds.). (2018). *Podstawy ekonomii*. Warszawa: Wydawnictwo Naukowe PWN.

- Nowa rzeczywistość: konsument w dobie COVID-19. Jak zmieniły się zwyczaje zakupowe Polaków w czasie koronawirusa?* (2020). KPMG. Retrieved from <https://home.kpmg/pl/pl/home/insights/2020/09/raport-nowa-rzeczywistosc-konsument-w-dobie-covid-19-jak-zmieniły-się-zwyczaje-zakupowe-polakow-w-czasie-koronawirusa.html> (15.05.2021).
- Panasiuk, K., & Panasiuk, B. (2017). Uzależnienie od komputera i Internetu – wybrane problemy. *Colloquium Wydziału Nauk Humanistycznych i Społecznych AMW, 1*, 59-84. Retrieved from <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.desklight-fb7cdc89-3972-4de0-ac3b-3ebc3e524116> (22.05.2021).
- Rozkrut, D. (2017). *Zjawiska i procesy kształtujące rozwój społeczeństwa informacyjnego i gospodarki cyfrowej w Polsce*. In K. Flaga-Gieruszyńska, J. Gołaczyński, & D. Szostek (Ed.). *E-obywatel E-sprawiedliwość. E-usługi*. Warszawa: Wydawnictwo C.H. Beck.
- Rymarczyk, J. (2021). The impact of industrial resolution 4.0 on international trade. *Entrepreneurial Business and Economics Review, 9*(1), 105-117. <https://doi.org/10.15678/EBER.2021.090107>.
- Społeczeństwo informacyjne w Polsce w 2020 r.* (2020). Warszawa: Główny Urząd Statystyczny. Retrieved from [https://stat.gov.pl/obszary-tematyczne/nauka-i-technika/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2020-roku,1,14.html](https://stat.gov.pl/obszary-tematyczne/nauka-i-technika/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2020-roku,1,14.html) (14.05.2021).
- Społeczeństwo informacyjne w Polsce. Wyniki badań statystycznych z lat 2004-2006.* (2008). Warszawa: Główny Urząd Statystyczny. Retrieved from <https://szczecin.stat.gov.pl/publikacje-i-foldery/nauka-technika/spoleczenstwo-informacyjne-w-polsce-wyniki-badan-statystycznych-z-lat-2004-2006,4,3.html?contrast=black-yellow> (14.05.2021).
- Stroiko, T., Nazarov, L., & Danik, N. (2021). Transformation of economic processes on the basis of digitalisation. *Baltic Journal of Economic Studies, 7*(1), 102-106. <https://doi.org/10.30525/2256-0742/2021-7-1-102-106>.
- Tomin, V.V., Erofeeva, N.E., Borzova, T.V., Lisitzina, T.B., Rubanik, V.E., Aliyev, H.K., & Shuapova, P.G. (2020). Internet Media as Component of Information and Communication Environment in Electoral Process: Features and Tools. *Online Journal of Communications and Media Technologies, 10*(3), 1-7, e202011. <https://doi.org/10.29333/ojcm/7932>.
- Woronowicz, B.T. (2009). *Uzależnienia. Geneza, terapia, powrót do zdrowia*. Warszawa: Wyd. Edukacyjne PARPAMEDIA.