

Beata Butryn

Wroclaw University of Economics and Business, Poland
e-mail: beata.butryn@ue.wroc.pl
ORCID: 0000-0003-4992-3044

DIGITALIZATION IN THE TRANSFORMATION OF THE BUSINESS ENVIRONMENT

CYFRYZACJA W TRANSFORMACJI ŚRODOWISKA BIZNESOWEGO

DOI: 10.15611/ie.2020.4.05

JEL Classification: O33, M29

@ 2020 Beata Butryn

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/>

Quote as: Butryn, B. (2020). Digitalization in the transformation of the business environment. *Informatyka Ekonomiczna. Business Informatics*, (4).

Abstract: The business environment is inextricably linked with the ongoing globalization process, which is currently stimulated by the dynamic development of ICT. The result of these dependencies is the digitization of the transformation of the business environment. The article discusses the issues related to globalization, which creates a new system of dependencies in the business environment, and the impact of digitization was presented, indicating that it is a key factor in the transposition of business processes. Modern technologies are changing the way business is managed, by setting new frameworks for cooperation opportunities, they shape strategies, organizational structures, and above all contribute to the development of new business models. The considerations lead to the achievement of the goal of indicating the growing importance of digitization in changes in the business environment. The increase in importance has significantly accelerated in the era of events related to the COVID-19 coronavirus pandemic. This article used the author's own research, literature studies, Internet sources, comparative analysis, and the logic of inference.

Keywords: digitization, digitalization, ICT technologies, business environment, globalization.

Streszczenie: Otoczenie biznesu nierozzerwalnie związane jest z postępującym procesem globalizacji, który obecnie stymulowany jest dynamicznym rozwojem technologii ICT. Wynikiem tych zależności jest cyfryzacja transformacji środowiska biznesowego. W artykule omówione zostały zagadnienia związane z globalizacją, która kreuje nowy układ zależności w otoczeniu biznesowym. Przedstawiono wpływ cyfryzacji na środowisko biznesowe, wskazując, że stanowi kluczowy czynnik transpozycji procesów biznesowych. Nowoczesne technologie zmieniają sposób zarządzania biznesem przez wyznaczanie nowych ram możliwości współpracy, kształtują strategię, struktury organizacyjne, a przede wszystkim przyczyniają

się do rozwoju nowych modeli biznesowych. Rozważania prowadzą do realizacji celu, jakim było wskazanie wzrostu znaczenia cyfryzacji w zmianach w środowisku biznesowym. Ten wzrost znaczenia zdecydowanie przyspieszył w dobie wydarzeń związanych z pandemią koronawirusa COVID-19. W niniejszym artykule wykorzystano badania własne, studia literaturowe, źródła internetowe, analizę porównawczą oraz logikę wnioskowania.

Słowa kluczowe: cyfryzacja, technologie ICT, środowisko biznesowe, globalizacja.

1. Introduction

The development of modern technologies is changing the business environment. Business activity has moved to the Internet and increasingly is relying solely on it. Business processes are transforming, and the core of the business strategy depends on the digitalization of the economy. The natural consequence of this process is globalization, integrating the business environment around the world, creating a new economic order. Modern technologies implemented in this system save time and money, and allow to create a huge competitive advantage. Digitization influences the transformation of the business environment by ensuring security (well-secured digital files are much less exposed to destruction), by fast information transfer, and continuous access to information. Undoubtedly, it is a dynamic process, just as digital technologies are developing dynamically and not fully predictable. Technological progress, the IT revolution, political and social changes, as well as trade liberalization and the free movement of workers, create new conditions for the modern economy and its entities. Favourable changes make it possible to see in the international expansion of a company an opportunity to build a competitive advantage. At the same time, the turbulent environment forces the company to react quickly, be flexible and adapt to changing market conditions. As emphasized by M.E. Porter, due to the growing number of global and sectors similar to global ones, expansion into foreign markets becomes a necessity for enterprises (Porter, 1992, p. 270). However, this entails the necessity of the organization functioning in an international network of political and economic relations, which primarily are more complex and are also subject to different regulations than in the country of origin. The phenomenon of the dynamization of the internationalization process has been observed for many years. This applies to both large corporations, which have ambitions to play an important role in the international arena, as well as medium and small enterprises looking for new markets for their products. Multilevel systems create an opportunity to achieve a synergy effect. However, functioning in numerous, often unknown markets is also burdened with numerous threats which result, among others, from attempting to enter into an unknown foreign market, functioning in an international network of political and economic dependencies, increasing the company's involvement in the processes taking place on foreign markets, and

creating numerous development opportunities. Dealing with them is possible thanks to creating links with entities operating in the global environment.

2. Literature research

Globalization of the business environment

Globalization consists in the multiplicity of connections and reciprocity of interactions between states and societies that make up the present world system (McGrew, 1992, p. 28), i.e. creating a network of dependencies between individual participants of economic processes, and also unifying products, services, and even cultures. This process is multifaceted, and covers the following areas: political, economic, social and geographical, which makes it ubiquitous and progressive and also inevitable. Historians see the beginnings of this phenomenon even in the spread of Christianity, Buddhism and Islam. The era of great geographical discoveries and the development of trade, when the economic foundations of the market economy were formed, are also considered an important stage, followed by the French and American revolutions which contributed to the development of industry. In the literature, three basic waves of this phenomenon are distinguished, directly related to these areas: the flow of people, the flow of information, capital and goods. The first wave covered the period 1870-1914 and was associated with the migration of people from Europe to North America. New forms and faster transport, as well as a reduction in customs duties led to a large increase in exports in the world. The second wave in 1950-1980 was characterized by the elimination of trade barriers, and the next one took place after 1980, when isolated countries started opening their markets to foreign goods (Borowiecki & Siuta-Tokarska, 2012, p. 16; Maciaszek, 2008).

To sum up, the factors contributing to the development of the globalization process are (Batorowicz, 1995):

- risk reduction, e.g. in production and supply by achieving independence from a single sales market,
- strengthening the market position of enterprises through brand globalization, i.e. brand recognition and associating it with specific products,
- taking advantage of situations favourable to investments in a given country (aimed at reducing production costs), e.g. using low-interest loans, subsidizing transport and energy, renting land and free facilities,
- avoiding trade and customs barriers by locating factories and assembly plants in the target countries, which at the same time reduces the costs of transport and storage,
- participation in strategically important markets due to their large size or due to their potential, supply of raw materials, workforce structure or technology,
- protection of the market leadership in one's own country through strong positioning in other markets,

- adjusting to the current world trends (demographic, new markets, etc.).

Globalization is a phenomenon that affects every element of business organisation. It can be a source of benefits, due to the possibility of access to cheaper factors of production and the better use of possessed resources, both tangible and intangible. At the same time, it is burdened with high risk in the economic, administrative, cultural and geographical spheres. An important role in the entire process is played by strategies, i.e. activities that are to allow the company to achieve success in the long term. They concern all activities related to enterprises crossing national borders. The corporate global strategy is based on two main sources of competitive advantage (Kuraś, 2020):

- the possibility of geographic dispersion of various fields and activities of the company in order to supply the world market,
- the ability to ensure coordination of the various links in the value chain.

Cabrera distinguished new skills for entrepreneurs to perform in the face of globalization, namely: global mindset, global entrepreneurship, and global citizenship. This approach to the globalization process means the ability to communicate across borders and cultures, through the ability to create new values for different cultures. The progressing process of globalization sets three key goals for global business, i.e.: combining cultures, creating new values for cultures regardless of the place, and participating in the development of each local community. They constitute the basis for the successful implementation of business processes in the conditions of globalization, determined by the ability to perceive and use changes taking place in the closer and more distant environment of the enterprise (Cabrera, 2013, p. 11). The dynamics of developing processes and changes in international politics, the consequences of which are manifested in the tightening of economic integration, globalization or internationalization, lead to profound changes in the conduct of economic activity. These changes mainly concern (Manyika, George, & Rasse, 2013, p. 20):

- shifting demand,
- innovations (mainly in the field of nanotechnology, the use of 3D in printing, etc.) relating to the shaping of new production methods, new sales methods, etc.,
- use of modern information and communication technologies.

These changes relate both inside the company and outside its environment, i.e. all elements not included in its composition, with their simultaneous occurrence in certain relationships, e.g. with customers, cooperators, suppliers, etc. (Bielski, 1997, p. 126). Information and Communication Technologies (ICT) are now perceived as an element fully integrated with the implemented business venture, with the client being at its center, whose needs, and the possibilities of satisfying them, are subject to significant transformations. Globalization means an increasing integration of the entities of the world economy creating a new economic system. Giddens defined this process as the intensification of social relations with a global reach, which connects various localities in such a way that local events are shaped by those taking place

thousands of miles away and have a feedback on them (Giddens, 1999). This process knows no deference both geographically and in time. Thanks to the mutual influence of the participants of economic processes, new networks of connections are created in the business environment of the organization. Due to the types of these relations and the role of the enterprise, the following are distinguished (Jelonek, 2009, p. 14):

- macro-environment, building the conditions of operation significant for success in business, the organization must adapt to it, including: political and legal, social, economic and technological conditions,
- the micro-environment, the elements of which interact directly with the organization, namely: buyers, competitors, suppliers and intermediaries and also some institutions from the public environment.

The progressing globalization has a fundamental impact on changes in the business environment, on its dynamics, diversification, uncertainty and generosity (Bluedorn, 1993, p. 166), manifested, among others, through:

- economic crises,
- changes to the product offer,
- changes in manufacturing processes,
- number of competitors,
- establishment of international organizations,
- cultural changes,
- disappearance of economic borders,
- new legal regulations.

The dynamics of changes, and the ability to predict or even shape opportunities and threats, is a challenge for business entities. Globalization creates a new system of dependencies in the company's business environment. The increased range of the organization and changes in the rules of competition in the global market place new tasks for all its participants. The main threats are: diminishing the role of the state as a regulator of economic processes, local autonomies, progressive environmental degradation, a clear division into the rich and the poor, inefficient social welfare system, and the violation of workers' rights by transnational corporations. These can be countered with the argument that this process is the driving force behind changes, the development of economies and the growth of their competitiveness. Additionally, it favours cross-border cooperation and the activation of small and medium-sized enterprises.

The continuous, progressive process of globalization seems inevitable. However, in the context of the coronavirus pandemic, blockades, closing national borders and disrupting supply chains increasingly point to the progressive process of deglobalization of the global economy. The business environment must adapt to the changes taking place, while at the same time pursuing such a policy that will allow for minimizing the risk and maximizing the benefits resulting from its spread.

3. Methodology

The business environment is closely related to the globalization process, created by the dynamic, sometimes unpredictable development of ICT. The result of this correlation is the digitization of the transformation of the business environment. Thus, along with the development of ICT, significant changes in the business environment and its surroundings are noticeable.

As can be seen in many literature studies, digitization has now become an obvious trend in the global economy, meaning not only the use of new technologies, but a change in the way of functioning, thinking and running a business. It is a chance for promotion to the global economic league, which is why it is so important for business to understand and adapt to new challenges. Digitization is a necessity for the development of modern business (Nowohoński, 2019). Indicating the growing importance of digitization in changes in the business environment leads to the goal of the issues under consideration, based on the author's own research, consisting of literature studies (Polish and English), Internet sources, observations, comparative analysis, and the logic of inference.

4. Results

The impact of digitization on the business environment

The foundation of the globalization process is ICT (Information and Communication Technologies). The basic factor behind changes in the business environment in the global world is the rapid, unpredictable development of these technologies.

D. Tapscott distinguished several important elements of the emergence of a modern economy, and thus the business environment. Digitization is the most important component that binds the others, such as: knowledge as the most important intangible good, virtualization, innovation, convergence, integration, immediateness, globalization, and incompatibility. At the same time, it should be noted that the digital world is assumed to lead to unification, however, as practice shows, the differences in the possibilities and income of those who have the necessary competences and those who do not have them are growing (Tapscott, 1995).

The digital economy plays a particularly important role in a Europe that is uniting economically despite political differences. Half of the increase in productivity in EU companies results from investments in new technologies (ICT). The speed of the Internet doubles every two to three years and the amount of data transferred every year. At the end of 2015, there were 25 billion mobile connected devices in the world, and in 2020 there are about 50 billion, and the amount of data sent by SIM cards increased twelve times between 2012 and 2018. Over 4 million IT specialists work in the European Union of which in Poland alone in 2020 around 300 thousand (as predicted by Arak & Bobiński, 2016).

The digitalization of the country is based on three pillars: the state, the economy and society. The most important link in this chain is the state, which plays a key role in building a digital infrastructure and constantly educating society, because without digital competences the whole process is impossible. With regard to business, the pull technology is usually used, manifested in the introduction of electronic administrative procedures, and the push technology, pushing enterprises towards new technologies, through, for example, co-financing the purchase of equipment, computer programs, and grants. The digitization of the economy includes (Arak & Bobiński, 2016):

- digital resources in the form of hardware, IT systems and connection networks, e-business,
- e-business, based on the dissemination of new media in relations between companies,
- e-commerce, related to the dissemination of ICT technologies in relations between the company and its clients,
- business environment, relating to the ‘friendliness’ of regulations, e.g. the protection of personal data,
- digital competences, understood as advanced skills in using computers and the Internet.

The task of the state is to support the development of digital society and create a coordinated and uniform digitalization strategy. However, digital development is not possible without public participation. The low level of basic digital competences of citizens may reflect a small need for companies to run their business online. Meanwhile, their presence in the network is vital because it is an important source of increasing demand.

Progressive digitization in three areas, i.e. the state, the economy and society, is spreading in the business environment. These observations are illustrated in Table 1, which shows, on a few selected examples, the impact of ICT on the business environment in Poland.

Table 1. The impact of ICT on the business environment in Poland

The main elements of the business environment	Characteristics of the elements of the business environment
1	2
Share of the national e-economy in GDP	In 2016, the share of the domestic ICT sector was 5% GDP, and in 2020 increased to 9.5%, thanks to the multiplier effect of Internet users.
Business costs	They are definitely decreasing thanks to electronics, more and more comprehensive customer service and digital information exchange within the supply chain.
The way of doing business	Wealth and the ease of doing business are related to digitalization, thanks to a technologically developed economy and an educated workforce, a friendly regulatory environment. In the Doing Business indicator in Poland for 2009-2015 it increased by 13 points, the greatest increase in Europe.

Table 1. cont.

1	2
Digitization of the economy	Poland is one of the fastest digitizing economies, taking 4th place in Europe in terms of increase in the Digitization of the Economy Index mainly concerns the use of Customer Relations Management and smartphones in everyday work.
Digital competences	Poland ranks 6th in Europe in terms of improvement of digital competences. Only one in ten Poles can use the Internet in an advanced way, e.g. create a website or send an e-mail with an attachment.
Business environment	Poland ranks 10th in improving the business environment, there is no open government policy consisting in making administrative records and processable databases available for both commercial use and scientific research.
Business digitization	Businesses are digitizing faster than consumers. Almost every company in Poland has a website on the Internet, of which 60% presents a catalogue with product prices, also with the possibility of ordering or buying the product.
Digitalization of sectors of the economy	The Polish financial sectors ranks 9th in Europe and is the most digitized among all sectors of the economy, this is due to the high competitiveness of the financial industry, in which, instead of going through the next stages of technological development, it was decided to use solutions that are profitable and have been adopted or take on the potential of the Polish market. Hence the dynamic development of e.g. contactless cards or mobile payments. The following sectors are below the European average: information and communication, other services, trade, industrial processing, specialist services, administrative services, energy, transport and storage, immovables, hotel and gastronomy, construction.
Digitalization of economic sectors	Small and medium-sized enterprises in Poland are usually relatively small. Micro-enterprises with up to 10 employees are dominant in the labour market, which statistically translates into the overrepresentation of companies that do not invest particularly in ICT.
The level of ICT technology development	In Poland, the level of ICT development is comparable to the level in the countries of our region of similar wealth. This means that more resources are needed to catch up with Europe's more affluent leaders.

Source: own study based on (Arak & Bobiński, 2016).

Technological development, as a result of which digitization is accelerating, is strongly correlated with the increase in the wealth and competitiveness of economies. The more the society and the economy become richer, the more readily and faster they are digitized. In Poland, software for process management in companies is used increasingly often, even when their infrastructure is not yet sufficient. Polish entrepreneurs work more and more often in CRMs, which they use to change the way they manage an organization. Although Poles are still the least able among all European societies to solve the so-called 'difficult problems at work' with the use of e.g. advanced computing technologies, Poland a country whose IT and ICT

specialists achieve international success. Working in a modern economy, using the constantly evolving ICT technology, requires from employees continuous training, while creating new opportunities for e.g. freelancers (Bukowski, 2015). It is also important that the state creates conditions for an efficiently functioning e-business, that the idea of Big Data can be implemented in organizations and that society can trust modern business (Wojciuk, 2018).

5. Discussion

Digitization as a key factor in the transposition of business processes

An important area of consolidating the strong position of ICT is business activity. The penetration of technology into its structures and functioning creates new forms and qualities.

The phenomenon of transferring business activity to the digital environment brings a number of benefits, such as the increased pace of project implementation, lower costs of business management and threats resulting from difficulties in adapting employees to changes. New technologies mean the ubiquitous digitization of activities, i.e. transforming the company's resources from paper into electronic form, primarily saves the organization both time and money. In the era of increasing competition, it can be stated that every company is forced to 'grow up to' a decision to participate in this process. In the digital economy, the most important values such as: business models, algorithms, software, large data repositories (Big Data), copyrights, organizational potential, social capital, knowledge, skills and strategic connections, are intangible (Andersen, 2015), so defining them monetarily in economic calculus becomes more and more difficult. The computational capabilities of computers on the one hand lead to the creation and widespread use of instruments to carry out complex conversion operations, on the other hand, they create new tools or sectors of the economy with shorter and shorter business cycles.

Currently, every business process is a digital business process, and expenditure on the development and integration of ICT with business goals is the key to the development of enterprises, growth of their innovativeness and, consequently, their competitiveness. The digitalization of the economy leads to the formation of macro and microeconomic conditions for the implementation of business processes. The most important of them are (Duczowska-Małysz, Duczowska-Piasecka, & Poniatowska-Jaksch, 2015):

- takeover of the world economy by the global digital economy,
- digital transformation of industry, including the development of creative industries,
- reverse distribution of the benefits of globalization, the so-called emerging markets, through huge investments in the development of the digital economy, will in the long run derive more benefits from the digitalization of the world economy than highly developed countries,

- reorganization of enterprises towards the better use of the achievements of the digital economy,
- creating the development of business processes by searching for new possibilities of using ICT and, as a result, increasing competitiveness,
- central position of the customer from emerging markets in the global economy.

In the era of the global digital economy, the greatest expectations are related to the development of the current generation of technologies, i.e. primarily mobile technologies, cloud computing, social networking sites, and Big Data, which find new applications in the enterprise.

Currently, organizations see benefits not only resulting from the development of mobile technology, but also associate them with understanding real changes in consumer behavior. This is because customers have a significant impact on the development of mobile technologies and in order to reach this wide audience, many new, diverse business models must be implemented (Duncan, Hazan, & Roche, 2013).

In practice, organizations most often use software generation designed to improve the functionality of an enterprise. However, in the era of digitization, software that takes into account higher analytical expectations is more desirable, because useful information more and more often becomes the company's assets. Thus, the pace of collecting, sorting and analyzing data to make immediate business decisions, to take advantage of new business opportunities, is gaining in importance.

The development of social networks has set a new framework for cooperation opportunities, which, determined by social expectations, should be taken into account in achieving business goals. Social networking sites require organizations to look at information, resources and knowledge differently, shaping a new business landscape that manifests itself in a systemic approach that goes beyond merely recruiting employees and creating a brand. Social networks offer more and more opportunities to be used by the business environment, there are more and better dedicated business applications. Greater ties are created not only between the company and the client, but also between companies. New forms of partnership are emerging in complex open business networks (Duczowska-Małysz et al., 2015).

Enterprises should anticipate which networks are future-proof and what the threats and consequences will be in relation to the level of security and quick implementation of new solutions. Regarding security, it is pointed out that governments need to invest in both cyberspace defense systems and digital intelligence offensive systems. Today, the cyber threat is one of the greatest challenges not only for companies, but also for entire economies. Building security has become critical to governments, multinationals, banks and small businesses alike (Sadoch, 2020). As for new solutions, in the era of the digital economy, organizations are forced to re-create strategies so that they go beyond e-marketing and e-commerce. On the one hand, an individualized approach to the client is necessary, which guarantees his greater

commitment and loyalty, and on the other hand, creates new opportunities for managing clients on a large scale.

The ongoing transformation of business processes in the digital economy era is visible not only in services, but also in the group of manufacturing companies. The new technologies used in them lead to the creation of (Duczkowska-Małysz et al., 2015):

- new production technologies, in which model digitization, simulation and visualization are applicable; robotization,
- The Internet of Things (IoT) technology, which leads to the decentralization of production, with simultaneous control and creation of the value chain,
- computer design, creating new standards in 3D,
- green industry, whose adoption is to improve productivity and reduce greenhouse gas emissions,
- new materials, design (e.g. nanotechnology, biotechnology, light materials),
- circular economy, in which the use of recycling is included in the production processes on a large scale,
- systems and business models that adapt to the individual needs of the client.

The era of digitalization is changing the conditions for the development of industry. The most important changes relate to a different approach and perception of the customer, global conditions of competition and abandoning mass production. When designing business processes in this area, one should take into account the challenges that result both from the need to design long-term development trends and from greater agility and adequate response to emerging opportunities and unforeseeable situations.

New opportunities in the implementation of business processes should be sought in global cooperation networks, which are characterized by flexibility, speed and segmentation. It is important that investing in modern technology also applies to business partners, e.g. cooperating parties, suppliers, and research centres. Cooperation and coordination of activities in this field reduces the risk of missed investment decisions (Manyika et al., 2012).

The dynamic development of technology is unstoppable, technology is everywhere and it spills over to the material world. Each innovative economic activity is based on ICT technologies and networks. In the case of the latter, this leads to open business cooperation, market access to specialist knowledge, knowledge transfer between the scientific and business communities, the use of tools outside the organization, e.g. outsourcing, and the active participation of the client in creating the future.

There are also issues related to the optimization of the company's architecture. Although Polish companies do not yet sufficiently use the potential contained in ICT solutions for business management (especially reducing operating costs and foreign expansion are not always the priorities of small and medium-sized enterprises), they more and more often see the benefits of using e.g. computing, building business

relations in social media and using traditional e-mail, as well as creating convenient ordering systems for contractors, suppliers, etc. In Poland, two sectors stand out positively in this respect, i.e. financial and insurance, as well as the service industry (especially repair of computer hardware) (Arak & Bobiński, 2016).

More and more companies operating in open business networks in a digitalized reality, are looking for solutions to shape their business models. They face the dilemma of whether to separate or integrate individual models within one organization. However, one thing is beyond doubt – today each of these solutions aims to place the needs and requirements of the client at the centre.

6. Conclusion

Recent years have seen significant changes in the global business landscape. The driving force of globalization is the development of ICT. It seems obvious that the business and business environment should be considered in the global context shaped by modern ICT technologies. The digitalization of the economy is increasingly influencing a thorough transformation of the business, management, implemented strategies, organizational structure and, above all, the change of business models. Currently, efforts to develop and integrate ICT with the achievement of business goals are becoming the key to innovation, development of enterprises and growth of their competitiveness. It has become a rule that the more complex the business activities, the greater the demand for advanced technologies, and their use constantly expands the scope of digitization of the business environment. The recent events related to the COVID-19 coronavirus pandemic have definitely accelerated the digitization process of transforming the business environment, because work, science, health matters and entertainment have been transferred to the Internet to a large extent and will probably stay there. It seems that the business environment is completely embedded in digitization, and this is the future direction.

References

- Andersen, B. (2015). Intangible gold: why no rush to finance innovation? In R. D. Atkinson., M. Mc-Ternani, & A. Reed (Eds.), *Sharing in the success of the digital economy. A progressive approach to radical innovation*. London–New York: Rowman & Littlefield International Ltd.
- Arak, P., & Bobiński, A. (2016). *Czas na przyspieszenie. Cyfryzacja gospodarki Polski*. Warszawa: Polityka Insight. Research.
- Batorowicz, B. (1995). Globalizacja działań przedsiębiorstwa i jej wymiary analityczno-opisowe. *Prace Naukowe Akademii Ekonomicznej im. Oskara Langego we Wrocławiu*, (705), 45–46.
- Bielski, M. (1997). *Organizacje: istota, struktury, procesy*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.

- Bluedorn A. C. (1993). Pilgrim's progress: trends and convergence in research on organizational size and environments. *Journal of Management*, 19(2).
- Borowiecki, R., & Siuta-Tokarska, B. (2012). *Wyzwania i dylematy społeczno-gospodarcze Polski w procesie transformacji*. Toruń: Wydawnictwo Dom Organizatora.
- Bukowski, M. (2015). *Zatrudnienie w Polsce 2014: Praca czasu innowacji*. Warszawa: Centrum Zasobów Ludzkich.
- Cabrera, A. (2013). What being global really means. *Harvard Business Review*, Summer.
- Duczowska-Małysz, K., Duczkowska-Piasecka, M., & Poniatowska-Jaksch, M. (2015). Nowe wyzwania stojące przed przedsiębiorstwem – implikacje zarządzania. In M. Poniatowska-Jaksch (Ed), *Nowe myślenie w zarządzaniu strategicznym przedsiębiorstwem*. Warszawa: Oficyna Wydawnicza SGH.
- Duncan, E., Hazan, E., & Roche, K. (2013). *Developing a fine-grained look at how digital consumers behave*. McKinsey.
- Giddens, A. (1999). *Runway World: The Reith Lectures revisited*. Retrived September 27, 2020 from <http://www.Les.co.uk/>
- Jelonek, D. (2009). *Strategiczna harmonizacja monitorowanie otoczenia i technologii informacyjnej w przedsiębiorstwie. Studium metodologiczno-empiryczne*. Częstochowa: Wydawnictwo Politechniki Częstochowskiej.
- Kuraś, P. (2020). *Internacjonalizacja działalności przedsiębiorstwa*. Retrived Novemebr 11, 2020 from <https://www.sbc.org.pl/Content/362647/kuraś.pdf>
- Maciaszek, Z. (2008). Globalizacja – ostatnia utopia? Zarządzanie zmianami. *Biuletyn POU*, (4).
- Manyika, J. K., George, K., & Rasse, L. (2013). Get ready for the new era global manufacturing. *Harvard Business Review*, Summer.
- Manyika, J., Sinclair, J., Dobbs, R., Strube, G., Rasse, L., Mischke, J., ... Ramaswamy, S. (2012). *Manufacturing the future: The next era of global growth and innovation*. McKinsey Global Institute, McKinsey Operations Practice.,
- McGrew, A. (1992). Conceptualizing global politics. In A. McGrew (Ed), *Global politics*. Cambridge: Polity Press.
- Nowohoński, M. (2019). *Cyfryzacja biznesu – szansa i konieczność*. Retrived Novemebr 15, 2020 from <https://www.parkiet.com/Akademia-inwestycyjna/309169927-Cyfryzacja-biznesu---szansa-i-koniecznosc.html>
- Porter, M. E. (1992). *Strategia konkurencji. Metody analizy sektorów i konkurentów*. Warszawa: PWE.
- Sadoch R. (2020). *Cyberbezpieczeństwo. Największe firmy kontra zagrożenia w sieci*. Retrived September 27, 2020 from <https://www.mbank.pl/mbank-news/swiat-inwestycji/cyberbezpieczenstwo-najwieksze-firmy-kontra-zagrozenia-w-sieci.html>
- Tapscott, D. (1995). *The digital economy: Promise and peril in the age of networked intelligence*. New York: McGraw-Hill.
- Wojciuk, A. (2018). *Empires of knowledge in international relations: education and science as sources of power for the state*. London and New York: Abingdon-Routledge.