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Contemporary management and ecology - Does the natural environment help managers to make a business decision?

Współczesne zarządzanie a ekologia – czy środowisko naturalne pomaga w podejmowaniu decyzji biznesowych?

ABSTRACT

Businesses do not operate in a space or vacuum but rather in a dynamic environment that has a direct influence on how they operate and whether they will achieve their objectives. This external business environment consists of numerous factors, such as economic, political and legal, demographic, social, competitive, global, ecological and technological. Each of these elements creates a unique set of challenges and opportunities for businesses. This paper aims to present perspective of contemporary management and ecology and answer the question – *does the natural environment help managers to make a business decision?* This aspect is still new for business owners and managers which have a great deal of control over the internal environment of business, which covers day-to-day decisions. They choose the supplies they purchase, which employees they hire, the products they sell, and where they sell those products. They use their skills and resources to create goods and services that will satisfy existing and prospective customers. However, the external environmental conditions that affect a business are generally beyond the control of management and change constantly. Therefore, to compete successfully, business owners and managers must continuously study the (business and natural) environment and adapt their businesses accordingly.

Key words: external business environment, decision-making.

STRESZCZENIE

Firmy nie działają w przestrzeni lub próżni, ale raczej w dynamicznym środowisku, które ma bezpośredni wpływ na to, jak działają i czy osiągną swoje cele. To zewnętrzne środowisko biznesowe tworzy zespół czynników ekonomicznych, politycznych, prawnych, demograficznych, społecznych, konkurencyjnych, globalnych, ekologicznych i technologicznych. Każdy z tych elementów stwarza unikatowy zestaw wyzwań i możliwości dla firm. Celem artykułu jest przedstawienie perspektywy ekologicznej współczesnego zarządzania oraz odpowiedź na pytanie, *czy środowisko naturalne pomaga menedżerom w podjęciu decyzji biznesowej.* Ten aspekt jest wciąż nowy dla właścicieli firm i menedżerów, którzy mają dużą kontrolę nad wewnętrznym otoczeniem biznesowym, obejmującym codzienne decyzje. Wybierają oni towary, które kupują, zatrudniają pracowników, wybierają produkty, które sprzedają, i określają, gdzie sprzedają te produkty. Wykorzystują swoje umiejętności i zasoby do tworzenia towarów i usług, które zadowolą obecnych i potencjalnych klientów. Jednak zewnętrzne warunki środowiskowe, które mają wpływ na biznes, są na ogół poza kontrolą kierownictwa i podlegają ciągłym zmianom. Dlatego, aby skutecznie konkurować, właściciele firm i menedżerowie muszą nieustannie badać środowisko (biznesowe i naturalne) i odpowiednio dostosowywać swoje firmy.

Słowa kluczowe: zewnętrzne środowisko biznesowe, podejmowanie decyzji.

INTRODUCTION

Modern organizations exist in vivid and turbulent business environment, which influence both their processes, resources, employees and candidates (Domaradzka, 2016; Malara, Miśko, & Sulich, 2016; Rutkowska & Pakulska, 2018). This external business environment is influenced and co-created by numerous factors, such as economic, political and legal, demographic, social, competitive, global, ecological and technological (Durán-Romero et al., 2020; Sołoducho-Pelc, 2014). Each of these elements creates a unique set of challenges and opportunities for businesses. Nowadays most of business is affected by the natural environment changes and from this are come most unexpected challenges towards management in organizations (Sulich, 2018). "First time in modern history, a factor (virus) coming from a natural environment became a warning for a global society and economy, which are still not sustainable nor balanced" (Sulich, 2020a). This might be seen as a warning for a humanity form the planet, but for sure is a disruptive factor for a business organization worldwide and has a natural or ecological background. Therefore, this paper presents perspective of contemporary management and ecology and answers the question already included in the title *Does the natural environment help managers to make a business decision?*

The problem if the influence of the natural environment on the business in not a new subject in the literature (Ikram, Sroufe, & Zhang, 2020; Merino-Saum, Clement, Wyss, & Baldi, 2020; Durán-Romero et al., 2020), but is related with resources management. We identified a research gap expressed in a specific question, which induce the need of the extended literature review and empirical research. Therefore, this theoretical paper serves as a very beginning of wider research and present our assumptions and views, which we are going to develop in further studies.

The paper is organized as follows in second part the dynamic business environment is presented. Then in subchapters all major elements of such business environment are presented. The article is closed by conclusions with some managerial implications and limitations for this theoretical paper.

1. THE DYNAMIC BUSINESS ENVIRONMENT

The dynamic of business environment is a clear fact, and it is often said that "constant is only change". There are many reasons of the such variability coming from both sides of the business environment (external and internal), as presented in Figure 1. Although Figure 1 does not consist the ecological dimension indicated directly, we claim that this area is probably most important and hard to classify. The ecological aspect influence both internal (customers' trends, workers attitudes) and external business environment (Domaradzka, 2020), which is outside of the organization and all listed in circle areas are actually emerged in the natural environment and its problems. For example the governments

around the world are focused on the environment management (the natural environment is a subject and treated as resource and common good) and this is also part of their politics (Grudziński & Sulich, 2018). Moreover, the natural disasters influence all dimensions of business environment and also the government role then is to provide a framework for the recovery of the business environment (Sun, Ikram, Mohsin, & Abbas, 2019).

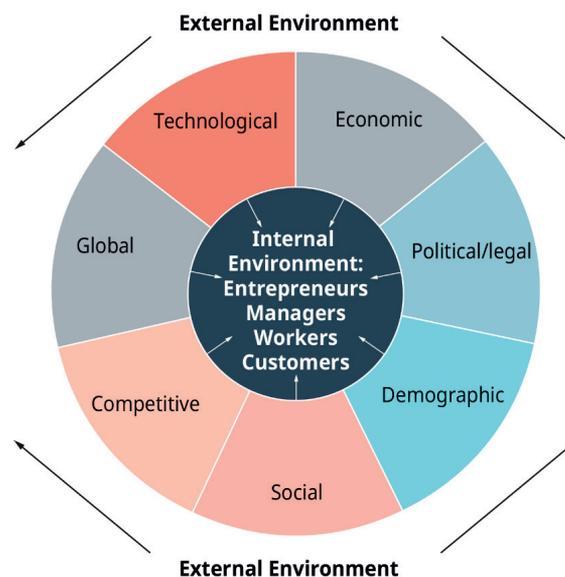


Figure 1. Business environment compounds

Source: (OER Services, 2019).

There is no enough large business or powerful enough to create major changes in the external environment. Thus, managers are primarily adapters to, rather than agents of change (Sulich, Rutkowska, & Tutaj, 2019). Global competition is basically an uncontrollable element in the external environment. In some situations, however, a firm can influence external events through its strategies (Loiseau et al., 2016; Sołoducho-Pelc & Sulich, 2020). For example, major U.S. pharmaceutical companies have been successful in getting the Food and Drug Administration (FDA) to speed up the approval process for new drugs (Healy, 2017). In the following subchapters we are going to take a brief look at these varied environmental influences.

1.1. ECONOMIC INFLUENCES

This category is important external influences on businesses and based on the different resources. Fluctuations in the level of economic activity create business cycles that affect businesses and individuals in many ways (Kowalska, 2020; Polowczyk, 2012). When the economy is growing, for example, unemployment rates are low, and income levels rise. Inflation and interest rates are other areas that change according to economic activity. Through the policies it sets, such as taxes and interest rate levels, a government attempts to

stimulate or curtail the level of economic activity (Sulich, 2016). In addition, the forces of supply and demand determine how prices and quantities of goods and services behave in a free market. The influence of ecology on the economy is so important that the term ecological economics was coined and this is a trans-disciplinary field.

We understand therefore, that economics is embedded in the broader ecosystem that supports all human activity. From this perspective, he sees both limits for economic growth and opportunities to improve long-term human well-being (Merino-Saum et al., 2020; Sulich, Rutkowska, & Pakulska, 2018). Ecological economics is not trying to be a subdiscipline of economics or a subdiscipline of ecology, but really it is a bridge across not only ecology and economics but also psychology, anthropology, archaeology, and history. That's what's necessary to get a more integrated picture of how humans have interacted with their environment in the past and how they might interact in the future (Rutkowska, 2020). It is an attempt to look at humans embedded in their ecological life-support system, not separate from the environment. It also has some design elements, in the sense of how do we design a sustainable future? It is not just analysis of the past but applies that analysis to create something new and better (A. M. Graczyk, A. Graczyk, & Żołyński, 2020; Ryszawska, 2015).

1.2. POLITICAL AND LEGAL INFLUENCES

The political climate of a country is another critical factor for managers to consider in day-to-day business operations (Khalid, 2019; Mempel-Śnieżyk, 2012). The amount of government activity, the types of laws it passes, and the general political stability of a government are three components of the political climate (Currnt, 2021). For example, a multinational company such as General Electric will evaluate the political climate of a country before deciding to locate a plant there. Is the government stable, or might a coup disrupt the country? How restrictive are the regulations for foreign businesses, including foreign ownership of business property and taxation? Import tariffs, quotas, and export restrictions must also be taken into account (Mempel-Śnieżyk, 2015). Also, in the United States, laws passed by Congress and the many regulatory agencies cover such areas as competition, minimum wages, environmental protection, worker safety, copyrights and patents. As a result, competition increased and new opportunities arose as traditional boundaries between service providers became blurred. Today the dramatic growth in mobile technology has changed the focus of telecommunications, which now faces challenges related to broadband access and speed, content streaming, and much-needed improvements in network infrastructure to address ever-increasing data transmissions (2017 *Telecommunications...*, 2017).

Federal agencies play a significant role in business operations. When Pfizer wants to bring a new medication for

heart disease to market, it must follow the procedures set by the Food and Drug Administration for testing and clinical trials and secure FDA approval. Before issuing stock, Pfizer must register the securities with the Securities and Exchange Commission.

The Federal Trade Commission will penalize Pfizer if its advertisements promoting the drug's benefits are misleading. These are just a few ways in which the political and legal environment affects business decisions.

States and local governments also exert control over businesses—imposing taxes, issuing corporate charters and business licenses, setting zoning ordinances, and similar regulations. We discuss the legal environment in greater detail in a separate appendix.

1.3. DEMOGRAPHIC FACTORS

Demographic factors are an uncontrollable factor in the business environment and are extremely important to managers. Demography is the study of people's vital statistics, such as their age, gender, race and ethnicity, and location. Demographics help companies define the markets for their products and also determine the size and composition of the workforce.

Demographics are at the heart of many business decisions. Businesses today must deal with the unique shopping preferences of different generations, which each require marketing approaches and goods and services targeted to their needs. For example, the more than 75 million members of the millennial generation were born between 1981 and 1997. In 2017 they surpassed baby boomers as America's largest generation (Fry, 2016).

In addition, minorities represent more than 38 percent of the total population, with immigration bringing millions of new residents to the country over the past several decades. By 2060 the U.S. Census Bureau projects the minority population to increase to 56 percent of the total U.S. population (Colby & Ortman, 2014).

Companies recognize the value of hiring a diverse workforce that reflects our society. Minorities' buying power has increased significantly as well, and companies are developing products and marketing campaigns that target different ethnic groups.

1.4. SOCIAL FACTORS

Social factors – our attitudes, values, ethics, and lifestyles – influence what, how, where, and when people purchase products or services. They are difficult to predict, define, and measure because they can be very subjective (Loiseau et al., 2016). They also change as people move through different life stages. People of all ages have a broader range of interests, defying traditional consumer profiles (Han, Heshmati, & Rashidghalam, 2020). They also experience a “poverty of time” and seek ways to gain more control over their time (Kozar, 2015). Changing roles have brought more wom-

en into the workforce. This development is increasing family incomes, heightening demand for time-saving goods and services, changing family shopping patterns, and impacting individuals' ability to achieve a work-life balance. In addition, a renewed emphasis on ethical behaviour within organizations at all levels of the company has managers and employees alike searching for the right approach when it comes to gender inequality, sexual harassment, and other social behaviours that impact the potential for a business's continued success (Sulich, 2020b).

Empathy on the part of organizations is a key factor in helping employees achieve balance. Companies that demonstrate empathy and work diligently to provide personal time for all employees tend to take the top spots on the work-life balance list. Comments have been seen from employee reviews for some companies that have fair and flexible work environments.

In this 24/7 world, when no one is far from a text or tweet, finding time for both family and work can be difficult, especially in the tax services industry, which is schedule driven for a good part of the year. Making a commitment to help workers achieve a healthy work-life balance not only helps its employees, but it also helps to retain workers in a tight labour market where individuals continue to have choices when it comes to where and for whom they want to work.

1.5 COMPETITION

Competition is another factor that strongly influences decision making processes within businesses (Deming, 2017). Since the market nowadays is highly competitive, business people always pay attention to the business operations of their rivals (Kroik & Skonieczny, 2010; Skonieczny, 1995). For example, when Apple released its iPad tablet, Samsung quickly responded by releasing its Galaxy Tab which proves that while taking decisions on future developments, businesses consider competitors and their business development plans.

1.6. GLOBAL FORCES AFFECT BUSINESSES

These global forces affect business around the world. The production and manufacturing goods and services reveals the trend towards globalization (Sulich, 2020b). Raw material availability, supply chain reliability, labor supply, wages, worker expectations, government regulations and consumer demand are all influenced by global factors (Ryszawska, 2017). Every aspect of the goods that are sold and the services which are provided by organizations, are at the "mercy" of the global forces affecting the economy. Understanding the mechanisms and processes of globalization can contribute to proper decision making in developing inter-organizational structures (Zema & Sulich, 2019). On the other hand, the relationship between the individual members of these structures may shape the processes of globalization and region-

alization (Sulich, 2020b; Tallman, 2008). An awareness of these forces would not keep them at bay, but will help you respond effectively to the rapidly changing world of business.

1.7. TECHNOLOGY

The application of technology can stimulate growth under capitalism or any other economic system (Rutkowska, 2001; Sulich & Zema, 2017). Technology is the application of science and engineering skills and knowledge to solve production and organizational problems (Sobczak, Bartniczak, & Raszkowski, 2020). New equipment and software that improve productivity and reduce costs can be among a company's most valuable assets (Bartniczak, 2016). Productivity is the amount of goods and services one worker can produce. Our ability as a nation to maintain and build wealth depends in large part on the speed and effectiveness with which we use technology—to invent and adapt more efficient equipment to improve manufacturing productivity, to develop new products, and to process information and make it instantly available across the organization and to suppliers and customers.

Many businesses, large and small, use technology to create change, improve efficiencies, and streamline operations (Sulich, T. Zema, & P. Zema, 2018; Zema & Sulich, 2019). For example, advances in cloud computing provide businesses with the ability to access and store data without running applications or programs housed on a physical computer or server in their offices. Such applications and programs can now be accessed through the Internet (Przysucha, 2020a, 2020b; Sulich & Zema, 2017). Mobile technology allows businesses to communicate with employees, customers, suppliers, and others at the swipe of a tablet or smartphone screen. Robots help businesses automate repetitive tasks that free up workers to focus on more knowledge-based tasks critical to business operations (Piwowar-Sulej, 2021).

CONCLUSION

The external business environment consists of ecological, economic, political and legal, demographic, social, competitive, global, and technological sectors. Managers must understand how the environment is changing and the impact of those changes on the business. When economic activity is strong, unemployment rates are low, and income levels rise. The political environment is shaped by the amount of government intervention in business affairs, the types of laws it passes to regulate both domestic and foreign businesses, and the general political stability of a government. Demographics, or the study of people's vital statistics, are at the heart of many business decisions. Businesses today must deal with the unique preferences of different generations, each of which requires different marketing approaches and different goods and services. The population is becoming increasingly diverse: currently minorities represent more than 38 percent

of the total U.S. population, and that number will continue to increase over the next several decades. Minorities' buying power has increased significantly as well, and companies are developing products and marketing campaigns that target different ethnic groups. Social factors – our attitudes, values, and lifestyles influence what, how, where, and when people purchase products. They are difficult to predict, define, and measure because they can be very subjective. They also change as people move through different life stages.

Ecology is a bigger framework for the business environment which influence all decisions in its subsectors. Therefore, to compete successfully, business owners and managers must continuously study the (business and natural) environment and adapt their businesses accordingly. There is a need for a future extended literature review and empirical research. This theoretical paper aimed to present research assumption which we are going to develop in further studies.

REFERENCES

- 2017 *Telecommunications Outlook*. (2017, March 1). The Wall Street Journal, CIO Journal, Deloitte. Retrieved from <http://deloitte.wsj.com/cio/>
- Bartniczak, B. (2016). Sustainable development concept in Polish strategic documents. *Economic and Environmental Studies*, 16(1), 49–64.
- Colby, S. L. & Ortman, J. M. (2014). *Projections of the size and composition of the U.S. population: 2014 to 2060*. U.S. Census Bureau. Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf>
- Currt. (2021). Sensing trends and disruptions impacting the government workforce. Currt website. Retrieved January 16, 2021, from <https://currt.com/s643/sensing-trends-and-disruptions-impacting-the-government-workforce>
- Deming, D. J. (2017). The growing importance of social skills in the labor market. *The Quarterly Journal of Economics*, 132(4), 1593–1640. <https://doi.org/10.1093/qje/qjx022>
- Domaradzka, A. (2016). Kształtowanie zaangażowania pracowników w małej firmie – studium przypadku dylematów aplikacyjnych. In M. Stor, A. Fornalczyk, & T. Listwan (Eds.), *Wybrane dylematy w zarządzaniu zasobami ludzkimi. Koncepcje badawcze i praktyka organizacyjna* (pp. 47–55). Wrocław: Presscom.
- Domaradzka, A. (2020). Configuration of selected competencies of international managers in knowledge transfer. In K. S. Soliman (Ed.), *Education excellence and innovation management: A 2025 vision to sustain economic development during global challenges. Proceedings of the 35th International Business Information Management Association Conference, 1-2.04.2020, Seville, Spain* (pp. 17904–17908). IBIMA.
- Durán-Romero, G., López, A. M., Beliaeva, T., Ferasso, M., Garonne, C., & Jones, P. (2020). Bridging the gap between circular economy and climate change mitigation policies through eco-innovations and Quintuple Helix Model. *Technological Forecasting and Social Change*, 160(November), 120246. Retrieved from <https://doi.org/10.1016/j.techfore.2020.120246>
- Fry, R. (2016). *Millennials overtake Baby Boomers as America's largest generation*. Pew Research Center.
- Graczyk, A. M., Graczyk, A., & Żołyński, T. (2020). System for financing investments in renewable energy sources in Poland. In K. Daszyńska-Żygadło, A. Bem, B. Ryszawska, E. Jaki, & T. Hajdıkova (Eds.), *Finance and sustainability. Proceedings from the 2nd Finance and Sustainability Conference, Wrocław 2018* (pp. 153–166). Warszawa: Springer, MNiSW.
- Grudziński, A. & Sulich, A. (2018). Green European integration. In M. Staničková, L. Melecký, & E. Kovarova (Eds.), *Proceedings of the 4th International Conference on European Integration 2018 May 17 – 18, 2018, Ostrava, Czech Republic* (pp. 364–371). Ostrava: VŠB – Technical University of Ostrava Retrieved from https://is.muni.cz/publication/1459476/ICEI-2018_Proceedings.pdf
- Han, J., Heshmati, A., & Rashidghalam, M. (2020). Circular economy business models with a focus on servitization. *Sustainability*, 12(21). Retrieved from <https://www.mdpi.com/2071-1050/12/21/8799>
- Healy, M. (2017, April 6). Speed up drug approvals at FDA? It's already faster than Europe's Drug Agency. *Los Angeles Times*. Retrieved from <http://www.latimes.com>
- Ikram, M., Sroufe, R., & Zhang, Q. (2020). Prioritizing and overcoming barriers to integrated management system (IMS) implementation using AHP and G-TOPSIS. *Journal of Cleaner Production*, 254, 120121. Retrieved from <https://linkinghub.elsevier.com/retrieve/pii/S0959652620301682>
- Khalid, S. K. (2019). Create shared value, as a new competitive advantage, and its impact on sustainable strategy analytical study applied on a sample of hotels in Erbil City. In *Proceedings book of International Conference on Accounting, Business, Economics and Politics, ICABEP 2019* (pp. 402–413). Erbil, Kurdistan Region of Iraq: Tishk International University in Erbil.
- Kowalska, M. (2020). Various forms of basic income as a remedy in times of crisis. In K. S. Soliman (Ed.), *Education excellence and innovation management: A 2025 vision to sustain economic development during global challenges. Proceedings of the 35th International Business Information Management Association (IBIMA) Conference, 1-2.04.2020, Seville, Spain* (pp. 14714–14720). IBIMA.
- Kozar, Ł. (2015). „Zielone” miejsca pracy jako efekt dążeń do zrównoważonego rozwoju społeczno-gospodarczego. *Rynek – Społeczeństwo – Kultura*, (3), 5–11.
- Kroik, J., & Skonieczny, J. (2010). Adaptacyjne i transgresyjne aspekty zarządzania organizacją publiczną. In W. Kieżun, L. Ciborowski, & J. Wołajski (Eds.), *Prakseologiczne aspekty zarządzania we współczesnych organizacjach publicznych: Public Management*, t. 2 (pp. 237–247). Warszawa: Akademia Obrony Narodowej.
- Loiseau, E., Saikku, L., Antikainen, R., Droste, N., Hansjürgens, B., Pitkänen, K., ..., & Thomsen, M. (2016). Green economy and related concepts: An overview. *Journal of Cleaner Production*, 139, 361–371.
- Malara, Z., Miško, R., & Sulich, A. (2016). Wrocław University of Technology graduates' career paths. *Vesnik Grodzenskağa dzâržanağa universitëta imâ Ânki Kupaly*. Ser. 5, Ekonomika, Sacyâlogiâ, Biâlogiâ, 6(3), 6–12.
- Mempel-Śnieżyk, A. (2012). Local authorities in supporting entrepreneurship on the example of Lower Silesia. In P. Hlavacek & P. Olsova (Eds.), *Proceedings of the 12th International Conference: Social and economic development and regional politics. Regional development and planning* (vol. 4, pp. 84–90). Univerzita J. E. Purkyne.
- Mempel-Śnieżyk, A. (2015). Znaczenie otoczenia biznesowego we współczesnej gospodarce rynkowej. In N. Derlukiewicz, S. Korenik, & K. Miszczak (Eds.), *Gospodarka i polityka regionalna. Nowe tendencje* (pp. 117–130). Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
- Merino-Saum, A., Clement, J., Wyss, R., & Baldi, M. G. (2020). Unpacking the green economy concept: A quantitative analysis of 140 definitions. *Journal of Cleaner Production*, 242, 118339. Retrieved from <https://doi.org/10.1016/j.jclepro.2019.118339>
- OER Services (2019). Understanding the business environment – Introduction to business. OpenStax. Retrieved January 13, 2021, from

- <https://courses.lumenlearning.com/suny-osintrobus/chapter/understanding-the-business-environment/>
- Piowar-Sulej, K. (2021). Human resources development as an element of sustainable HRM – with the focus on production engineers. *Journal of Cleaner Production*, 278. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090601047&doi=10.1016%2Fj.jclepro.2020.124008&partnerID=40&md5=ac188b5f2373db0a447c3e93f3e55943>
- Polowczyk, J. (2012). Strategic management at the beginning of the XXI century: The impact of crisis turbulences. *The Poznań University of Economics Review*, 12(3), 81–98.
- Przysucha, Ł. (2020a). Effective management of information processes with CMS in smart city. The concept of crowdsourcing. In E. Mercier-Laurent (Ed.), *Artificial intelligence for knowledge management*. 6th IFIP WG 12.6 International Workshop, AI4KM 2018 Held at IJCAI 2018 Stockholm, Sweden, July 15, 2018 Revised and Extended Selected Papers, IFIP Advances in Information and Communication Technology (Vol. 588, pp. 65–76).
- Przysucha, Ł. (2020b). Implementation of crowdsourcing as an integral element of communication engineering in the smart city concept. *RISTI – Revista Iberica de Sistemas e Tecnologias de Informacao*, (E30), 97–108.
- Rutkowska, M. (2001). Ryzyko w ubezpieczeniach zdrowotnych. *Zeszyty Naukowe Wyższej Szkoły Ekonomicznej w Stalowej Woli*, 1, 44–57.
- Rutkowska, M. (2020). Modern management models (colors). *European Journal of Management and Social Science*, 1(September), 17–22.
- Rutkowska, M. & Pakulska, J. (2018). Innowacje ekologiczne w przedsiębiorstwach w Polsce. In Z. Malara & J. Skonieczny (Eds.), *Innowacje w gospodarce, przedsiębiorstwie i społeczeństwie* (pp. 125–133). Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej. Retrieved from <https://www.dbc.wroc.pl/dlibra/publication/95951/edition/58155>
- Ryszawska, B. (2015). Green economy indicators. In M. Burchard-Dziubińska (Ed.), *Towards a green economy. From ideas to practice* (pp. 31–52). Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- Ryszawska, B. (2017). Green economy transition and regional policy of European Union. In P. R. Pucentejlo (Ed.), *Prikladna ekonomika – vid teorii do praktyki : materialy miznarodnoi naukowo-prakticnoi konferencii [Ternopil, 27 zovtna 2017 r.]* (pp. 13–16). FOP Osadca.
- Skonieczny, J. (1995). Wspólnym frontem. *Businessman*, 9, 84–86.
- Sobczak, E., Bartniczak, B., & Raszkowski, A. (2020). Aging society and the selected aspects of environmental threats: Evidence from Poland. *Sustainability*, 12(11), 1–22.
- Sołoducho-Pelc, L. (2014). Koncepcja i wdrażanie strategii w małych, średnich i dużych przedsiębiorstwach. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 366, 470–484.
- Sołoducho-Pelc, L. & Sulich, A. (2020). Between sustainable and temporary competitive advantages in the unstable business environment. *Sustainability*, 12(21), 8832. Retrieved from <https://www.mdpi.com/2071-1050/12/21/8832>
- Sulich, A. (2016). Active labour market policy as a source of legitimacy for governments of Central Europe countries – comparative analysis. *World Scientific News*, 60, 78–91.
- Sulich, A. (2018). The green economy development factors. In K. S. Soliman (Ed.), *Vision 2020: Sustainable economic development and application of innovation management from regional expansion to global growth*. Proceedings of the 32nd International Business Information Management Association Conference: 15–16 November 2018, Seville, Spain (pp. 6861–6869). IBIMA.
- Sulich, A. (2020a). *United Nations sustainable development goals – How they changed my career?* Research gate. Retrieved January 16, 2021, from https://www.researchgate.net/publication/346576875_United_Nations_Sustainable_Development_Goals_-_How_they_changed_my_career
- Sulich, A. (2020b). Człowiek wobec zjawisk i procesów globalizacji. Man in the face of phenomenon and processes of globalization. *European Journal of Management and Social Science*, 1(September), 7–10.
- Sulich, A., Rutkowska, M., & Pakulska, J. (2018). Green economy as the next development stage of the corporate social responsibility idea. In Z. Alipoor & V. Vakili (Eds.), *The International Scientific Conference on Challenges in Social Sciences and Business: Conferences Proceedings, 17th to 19th March 2018, Dubai* (pp. 11–20). Retrieved from http://www.iccssb.com/uploads/uploads/iccssb_pr_2018.3.pdf
- Sulich, A., Rutkowska, M., & Tutaj, J. (2019). The innovativeness of green sector enterprises. In J. Kopec & B. Mikula (Eds.), *Knowledge – Economy – Society. Challenges for contemporary economies – Global, regional, network and organizational perspective* (pp. 239–246). Torun: TNOiK Dom Oragnizatora.
- Sulich, A. & Zema, T. (2017). Problem zarządzania ryzykiem we współczesnej filozofii techniki. In M. Olkiewicz, M. Woźniak, M. Drewniak, & J. Chmura (Eds.), *Nauka i biznes – wyzwania XXI wieku*. Cz. 2 (pp. 8–21). Waleńców: Wydawnictwo Naukowe Intellect.
- Sulich, A., Zema, T., & Zema, P. (2018). Green entrepreneurship in the European integration context. In M. Staničková (Ed.), *Proceedings of the 4th International Conference on European Integration 2018, ICEI 2018* (pp. 1393–1400).
- Sun, H., Ikram, M., Mohsin, M., & Abbas, Q. (2019). Energy security and environmental efficiency: Evidence from OECD countries. *Singapore Economic Review*, 22(10), 1–18. Retrieved from <https://www.worldscientific.com/doi/abs/10.1142/S0217590819430033>
- Tallman, S. (2008). Global strategic management. In M. A. Hitt, R. E. Freeman, & J. E. Harrison (Eds.), *The Blackwell handbook of strategic management*. John Wiley & Sons.
- Zema, T. & Sulich, A. (2019). Relations in the interorganizational networks. *International Journal of Social Sciences & Educational Studies*, 6(1), 111–121.