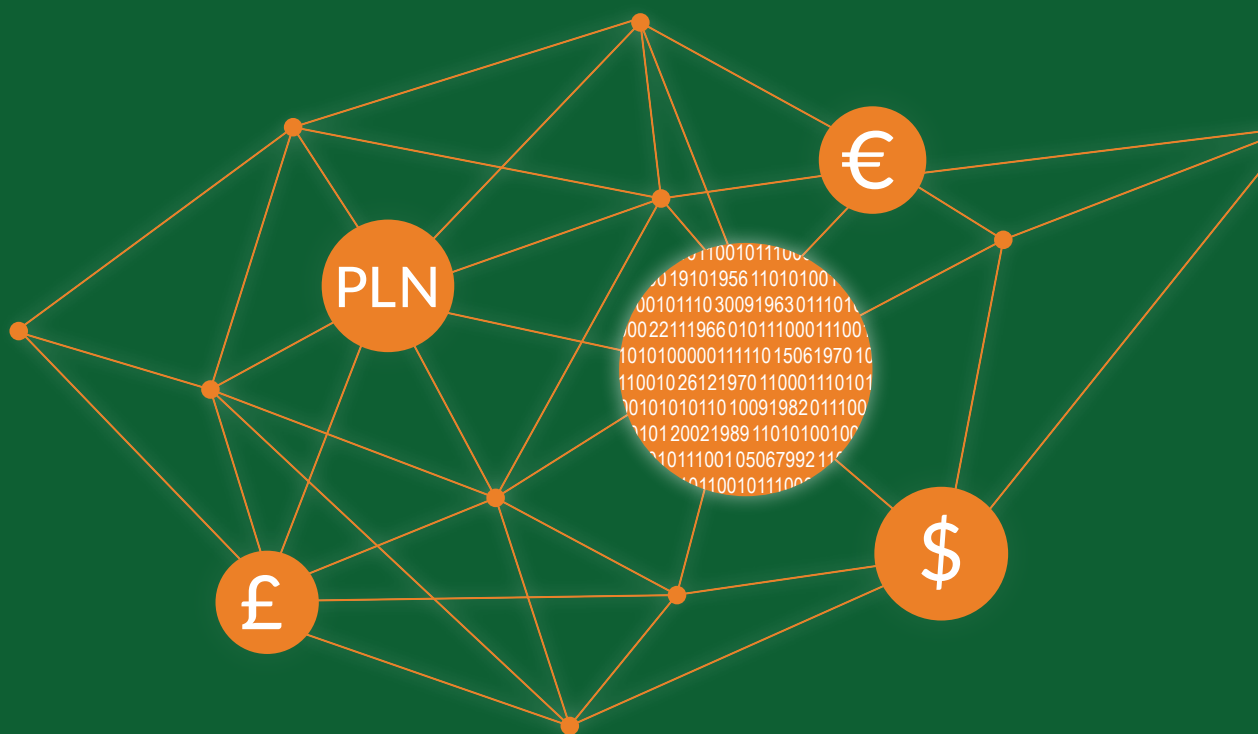


THE ECONOMICS OF INFORMATION

Theory and practice

research editor

Przemysław Deszczyński



Wydawnictwo Poznańskiego Towarzystwa Przyjaciół Nauk

The economics of information

Theory and practice

POZNAŃSKIE TOWARZYSTWO PRZYJACIÓŁ NAUK

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<http://ptpn.poznan.pl/en/>

dystrybucja@ptpn.poznan.pl

EDITOR-IN-CHIEF THE PTPN PUBLISHING

Jakub Kępiński

REVIEW:

dr hab. Monika Kaczmarek-Śliwińska

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Introduction

The economics of information. Theory and practice is an English-language version of the monograph *Ekonomia informacji* written in September 2019 and published at the beginning of 2020. The idea of translating it into English was born after posting the texts on ResearchGate. Then requests to make it available in English appeared. Rapid changes that have taken place in the world economy over the past year caused some authors to consider it necessary to include them in their texts. Therefore, the update of the texts have been provided, mainly in the context of consequences of the pandemic, but also concerning the entry of Brexit into the next phase. Attention was paid not only to the theoretical but most of all to the practical dimension of information economics. Moreover, the comments that appeared in reviews published in scientific journals, including those concerning the structure of work, have been taken into account.

The monograph consists of eight chapters. Each of them was written by a different author. In the first chapter, the conceptualization of the term ‘economics of information’ was presented. It covers the genesis of information economics, an original definition and methodological foundations. It is a starting point and supporting structure of the entire book. The authors of the remaining chapters refer to and comply with the adopted convention of analysis presented by the research editor.

The second chapter is devoted to the economics of information in internal communication in the era of social media. It constitutes a sort of bridge between *information economics* and *public relations* narrowed down to internal communication. Jacek Trębecki refers to the relationship between behavioral economics and classical economics. He emphasizes that the consequence of information asymmetry may be its influence on distortion of decisions.

Chapter three by Waldemar Ryzak – *Changes in Access to Information in Crisis Situations* – as intended by the author, is to be a starting point for a discussion about the role of information in the contemporary market, which is more and more frequently discussed

in the context of the fourth digital wave of development, with significant influence of mass media and the Internet, also in the context of the COVID-related situation.

In the fourth chapter, Filip Kaczmarek used the assumptions of counterfactual analysis in his considerations, and on the basis of its results he showed that the so-called opportunity costs, or ‘cost of non-Europe’, are used as an instrument of legitimizing the European Union.

In chapter five by Aleksandra Rabczun, *Brexit and the Economics of Information*, the Brexit case was analyzed in the context of the role played by information economics in this process.

Chapter six, written by Izabela Janicka, is an example of using the concept of economics of information to analyze one country, in this case Germany. It was also assumed that both macro and micro aspects are taken into account. The author points to the overriding role of information in the post-industrial economy and to the fact that information has become one of the basic production factors. She also introduces the concept of a functional information minimum and an information gap.

In the seventh chapter Marcin Leszczyński defines the role of the state’s reputation in reducing information asymmetry in the global market. The chapter ends with the analysis of policy and diplomacy in shaping trust in a government and the demand for products from a given country on the example of the trade war between the US and China.

In the eighth chapter, *Information, Welfare and Migrations – Practical Remarks in the Context of the Economics of Information*, Katarzyna Świerczyńska fitted into the scope of research on the impact of information on economy and economic decisions of entities at the mega-economic level.

Przemysław Deszczyński

Poznań, 11.11.2020

I

Conceptualization of the Term ‘Economics of Information’

(PRZEMYSŁAW DESZCZYŃSKI)

Introduction

The relevance of the economics of information has been appreciated by the Sveriges Riksbank (the central bank of Sweden), which in recent years has awarded almost half of all of the Nobel Memorial Prizes to the economists dealing with widely understood communication. Thus, it was concluded that getting to know the specificity of information in the context of its acquisition and dissemination is necessary for the proper analysis of the functioning of economies, that companies and corporations, and even governments wishing to meet the changing expectations of consumers / citizens must understand the importance of transparent and coherent communication and meet the ever-increasing information needs of its stakeholders.

Despite of using the term ‘economics of information’, so far little space has been devoted in the literature on the subject to what should be understood by this term and how to implement this phenomenon in scientific research and (although there has been a significant progress here) in the economic practice. These are the issues discussed in this chapter. It covers the genesis of the economics of information, as well as the author’s definition of the term. Moreover, for the first time in the literature, an attempt was made to build a methodological base for researchers dealing with the economics of information.

1.1. The genesis of the economics of information

The 21st century is the age of information which nowadays plays a crucial role in human life. It does not mean, however, that in the past a proper attention was not paid to information in economy (which is the most interesting for us), but also in political, social, and military spheres. Obtaining the information that the merchandise / raw material needed by a person / state does not occur in the given area, but can be obtained or bought much cheaper somewhere else and, at the same time, any goods that

have been brought there can be sold at a much higher price than in the place of its acquisition or production, has become a turning point in the development of international trade. That is how trade routes were established, including the most famous one, the Silk Road, but also our Amber Road. The search for an alternative route to India, from which goods needed by the Europeans, including spices, were imported, contributed to the discovery of new continents and, as a result – to expansion of the European civilization.

The incentive to undertake this type of ventures was trade which was highly profitable. It has become a source of wealth and power for the cities and states participating in it. However, not all of the participants profited equally from its benefits. Information asymmetry and the ability to organize trade (transport, logistics, capital) meant that the strongest party was the one that benefited the most. It is no coincidence that in Greek and Roman mythology Hermes and Mercury were the gods of both merchants and thieves. An example of this kind of asymmetry of information may be the case of Europeans who were trading beads, which were of low value in Europe, for gold and valuable goods from Native Americans. By contrast, the Hanseatic League – a union of merchants and cities established in the 13th century – is considered to be an example of an efficient way of organizing trade in the economic history (Deszczyński, 2008, pp. 10–11). To this day, the Hanseatic cities are admired not only for their wealth but also for the beauty of the buildings and the accompanying infrastructure created at that time.

While in the economic practice the importance of information has never been overlooked (on the contrary – asymmetry in access to information has been successfully used to gain spectacular fortunes, most often in a dishonest or morally reprehensible ways), in theory of economics, until recently, the existence of perfect information, as well as perfect competition, was assumed *a priori*, as it is impossible to fully reflect the existing economic realm by using economic models. They must be based on certain simplifications. Otherwise, they would be hard to use. And that would be the case if information asymmetry or lack of access to it were assumed, especially in the absence of advanced IT. Relying on simplified models and making assumptions contradictory to the real economy (the case of the existence of perfect information) partially explains why economists did not predict in any of the theories the scenario of what will happen in the future in such a way as to make decisions and take actions in advance to prevent from the occurrence of unfavorable (or, sometimes, even catastrophic in terms

of their course and consequences, not only economic but also socio-political) economic processes. This is exemplified by the great economic depression of the 1930s, the energy and raw materials crisis of the 1970s, and the last financial crisis in the USA of 2007, which in September of 2008 affected the entire world economy (Deszczyński, 2015, pp. 329–330).

Economics is a social science and identifying regularities occurring in the economy does not necessarily mean that they are universal and timeless, unlike natural sciences such as physics which deals with studying general properties of matter and phenomena occurring in it, as well as detecting general laws ruling these phenomena. Therefore even if we do discover them, we cannot be sure that they will not become outdated over time (time determinism) or if they will occur and work in a different location (broadly understood territorial determinism) (Deszczyński, 2011, p. 34).

If we analyze the to-date achievements of the world economic thought, the analysis shows that regardless of the erroneous assumptions about the existence of perfect information, it is no coincidence that doctrines such as liberalism, mercantilism, institutionalism, state interventionism or monetarism developed precisely in one and not another period (time determinism) and in certain countries (territorial determinism). At the same time, they were reflected in functioning of the real economy, as they were created as the effect of changes in the system of norms and rules of conduct in the economic space and were a response to the needs of contemporary entities, not only economic but also often political and social (Deszczyński, 2009b, p. 89). That means that the main stimulus for the emergence of many economic theories was the desire to explain economic phenomena that had already occurred in the economic practice. As an example can serve the legacy of the fathers of the classical economics. It was not a coincidence that A. Smith's theory of the absolute advantage was formulated first, and only after that – the theory of comparative advantage by D. Ricardo. Each time they reflected the situation of the then world economic power – England.

So what happened that it was precisely the 21st century that has been recognized as the age of information and that the economics of information has emerged? Over time numerous conditions have changed (time determinism). The first to be mentioned are those in the spheres of economy, technology, and knowledge. They have caused access to information, and even more so – the economics of information, to determine, as never before, the optimal decision-making by entities at all levels of economic life.

Economy, technology, and knowledge – this specific triad, influencing each other by systematic development – has led to a situation in which the world has become a ‘global village’ (territorial determinism). The final effect of the dynamic development of economy, technology, and knowledge – as shown by the economic history of the world so far – is globalization, and the essence and shape of it is currently largely related to the IT revolution.

In the agrarian era, when nearly 100% of GDP was generated in agriculture, the level of technology and knowledge was limited to the so-called pre-Newtonian era. Changes were not taking place, and even if they had, they would have been happening very slowly and would not have been noticeable in one generation’s lifetime. It took centuries to reach the industrial era. Since the publication of the fundamental work of Isaac Newton *Philosophiae naturalis principia mathematica* in 1687, traditional society and natural social ties have been gradually eroding due to the fact that the role of agriculture and craftsmanship has been systematically diminishing and the place of residence could no longer remain a workplace for an increasing number of people¹ (Deszczyński, 2009a, p. 12).

Irreversible changes in the consciousness of European societies were brought about by the revolutions: in England, but especially the French Revolution and the period of the Napoleonic Wars. Europe at that time was being unified under the banner of the fight for realization of the principles of liberty, equality, and fraternity. Of particular importance was the principle of broadly understood freedom (not only economic but also political and personal), which, regardless of the inventions and discoveries at the turn of the 18th and 19th centuries, contributed to unprecedented dynamic economic development in the world. Characteristic for the 19th century was the previously unimaginable dynamics of changes in all levels – from technological, economic, social, demographic, to cultural. Particularly impressive were the achievements in the field of technology – from electricity to steam engines and dynamite, from locomotives to gas plants and dynamos. As a result, world GDP was growing rapidly supported by a sevenfold increase in international trade between 1860 and 1913. For these reasons, literature on the subject calls this period ‘belle époque’ or ‘the golden age’, and *ex post* it has been called ‘the first globalization’ (Ravenhill, 2008, pp. 279–280).

¹ History is coming full circle right now. It is only a matter of time when the place of residence will again become also a place of work for an increasing number of people, no longer in agriculture and crafts but in the electronic economy in which one cannot function without access to information.

The first globalization was accompanied by very high and hardly acceptable social costs. The benefits it was bringing were not shared quite evenly. As a result, totalitarian forces had to and did appear and used this situation to take over the power. The period of fascist and communist rules was the most horrible period of our civilization. It took millions of lives without solving any problems. On the contrary – many of them have accumulated and aggregated. It is worth emphasizing here that gaining power by the communists and maintaining it for such a long time became possible not only as a consequence of terror but also thanks to the fact that they appreciated the role of information in the form of propaganda in the indoctrination of their own society, as well as deceiving the leaders of democratic states and international political opinion (Deszczyński, 2014, p. 121).

The Iron Curtain, regardless of objective changes of a revolutionary nature – mainly technological, primarily in the field of communication and transport techniques – as well as the establishment of a number of organizations and institutions (including the United Nations, the International Monetary Fund, the World Bank and the General Agreement on Tariffs and Trade), whose task was to organize and solve problems emerging in the world, was effectively inhibiting the processes of globalization. It was only the Autumn of Nations in Central and Eastern Europe, and then the collapse of the Soviet Union in 1991, that caused the triad – economy, technology, and knowledge – to acquire dynamic development, unheard of in the economic history of the world, with knowledge being primarily about information and the economics of information.

1.2. The concept of the economics of information

So far the concept of the economics of information has been poorly described in the literature on the subject. There is also no universally accepted definition. It should be expected that this term will be formulated and interpreted differently depending on what field of social studies a researcher represents. Due to the interdisciplinarity of information economics and the variety of research methods used within it, especially those classified as qualitative, the definition spectrum will probably be very broad. The economics of information, as already emphasized, is inextricably linked with information asymmetry. Although in the economic practice it was realized that it exists, it was consistently ignored in economic theories. The situation began to change at the beginning of

the second half of the 20th century, when more and more economists started to draw attention to the need of reorientation in this approach. E.g. F.A. Hayek emphasized that in the model of perfect competition, in fact, there is no such competition, because all the features of actual competition, such as advertising, innovation and price reduction, are excluded due to assumption of the existence of perfect information (Hayek, 1998, p. 96).

Awarding Nobel prizes to economists dealing with asymmetry of information in their research was of key importance for the change of the current paradigm in economic theory. In 1996, William Spencer Vickrey received this award for the economic theory of incentives, in which participants have asymmetric information, and James Mirrlees for research on the theory of motivation and information asymmetry in management and decision making. In 2001, the prize winners were jointly J.E. Stiglitz, G.A. Akerlof, and A.M. Spence. J.E. Stiglitz analyzed the existence of differences in access to economic information and its consequences for the employee on the one hand and the employer on the other, then the credited party and the loan creditor, and the policyholder and the insurance company (Stiglitz, 2007, p. 9). Without diminishing the achievements of all Nobel laureates in the field of economics dealing with information asymmetry, it was J.E. Stiglitz who most popularized everything that we now call the economics of information, as he was not only a professor at the prestigious Columbia University but in the years 1993–1997 – the head of the Council of Economic Advisers to the US President William J.B. Clinton, and in 1997–2000 – chief economist and vice president of the World Bank. The character of J.E. Stiglitz shows that one not only needs to have something significant to say in a scientific sense, but it is equally – if not more – important to reach an influential scientific body and international public opinion with this message. Everything that is the essence of the economics of information has accumulated in J.E. Stiglitz. He has laid the foundations for it, and at the same time it has enabled him to achieve spectacular success as a scientist. He used his knowledge in the White House, and then at the World Bank, observing from the inside what the determinants of decisions were and why they did not serve to solve problems that could have been solved if not for the primacy of various types of selfish and / or orthodox, often contrary to the common sense, beliefs of those in power. J.E. Stiglitz has repeatedly emphasized the great importance of free access of citizens and companies to information, as well as its transparency. He pointed out that information economics born of the economic practice, freed from doctrinaire, very simplified as-

sumptions, has better, more adequate to reality analyzes of the labor, capital and goods markets (Stiglitz, 2007, p. 9).

The economics of information still waits for its definition. The author's proposition of understanding this concept is presented below. The economics of information means comprehensive analysis and research:

- to what extent information affects the economy and economic decisions of subjects in all economic levels, from micro–micro–, micro–, meso–, macro–, to megaeconomic,
- how the emerging information, both our own and external, being beyond our control, can be optimized from the point of view of the economic results of the company, corporation, industry, economy, integration groups, and currency zone (Deszczyński, 2017, p. 57).

1.3. Research methods of the economics of information

Scientific research in the field of the economics of information uses most of the research methods used in social sciences, both quantitative and qualitative, however many of them, especially the former, are only of an auxiliary nature. First of all, they enable the collection and processing of data in order to obtain the most reliable information on the basis of which one can optimize the decisions made. For that, inductive reasoning is used, i.e. generalizations are derived from the information material collected in the course of empirical research. (Frankfort-Nachmias, Nachmias, 2001, pp. 17–577).

The primacy of qualitative methods results from the nature of the economics of information. There is no room for too far-reaching simplification, a certain schematicism that inevitably accompanies quantitative methods. The latter have undoubtedly their advantages but – along with the extremely dynamic economic development taking place in the conditions of globalization – disadvantages definitely overweigh, e.g. because the quality of data, even of such renowned institutions as the European Statistical Office, leaves a lot to be desired. The following methods are of particular importance for the economics of information: historical, comparative, institutional-legal, system analysis, and especially case study which is most often used as a method in qualitative research. However, it should be clearly emphasized that these are not all methods used in research and practice of the economics of information but they are certainly part of the group of the most important ones.

The historical method is one of the oldest used in scientific research. As far back as in antiquity, its significance was emphasized by the sentence *Historia est magistra vitae* (History is the teacher of life). It would seem that the very high dynamics of changes in economic life, which was the basis for the birth of the economics of information, would question its usefulness. Nothing could be further from the truth. Supported by the comparative method, it allows not only to learn about certain phenomena and facts but also to explain them in the light of the causes, conditions, and premises of the procedure. What is extremely important in the context of the imperfection of economic theory in comparison to natural sciences, it also has a predictive value. If we follow the events that appear in the history of international or economic relations in the world, we can see that they provoke an almost identical reaction from international financial markets. For example, any tensions in the Middle East – which still remains a reservoir of energy resources for the West – always result in higher oil prices per barrel. In turn, amid global uncertainty, both political and economic, the US dollar strengthens and the price of gold per ounce rises.

The comparative method is based on the search for similarities and / or differences between processes and events taking place in the global economy. It is also called the method of analogy, and this name reflects better the essence of its subsidiarity when used together with the historical method – then these two methods take the form of a historical comparative method. In the examples given above, the financial markets reacted in the same way as in previous historical periods. They could, however, differ in the scale of reaction. An example is the Yom Kippur War of October 6, 1973, to which the Arab oil-exporting states responded on October 17, 1973. They then announced that they would reduce oil production by 5% per month until Israel withdraws from the occupied territories and the Palestinians obtain their due rights. At the same time, they raised prices by 17% per barrel (Deszczyński, Gołata, Krawulski, 1995, pp. 151–152). The Arab countries did not manage to achieve the political goals mentioned above; however, they themselves probably did not expect such a sharp rise in oil prices in the short term – first from USD 8 to USD 20, and then, in the long term, in 1979 – USD 40.

The comparative method can also be applied autonomously, using as an analogy:

- Certain business ventures that are not necessarily a copy, but rather some sort of inspiration that is difficult to prove. In 2004 Facebook was created, and two years after that – Polish social network Nasza Klasa. Other example

of a number of levels with some common features, but also some differences, is the genesis and development of the Aldi supermarket chain and, a little later, Lidl.

- Price structure on the markets of the ‘old states of the EU’ and the new Member States. For example, information about the existence of significant differences in the prices of 1 square meter of residential or office space between these groups of countries means that you cannot lose on buying apartments or making investments in housing construction in the new EU countries, and the probability of lucrative profits is very high.

The institutional-legal method is of particular importance for information economics. This is because it is a legal institution understood, on the one hand, as a set of legal norms defining a specific situation / process, and on the other – as a separate organizational structure of an institution. In both cases, the focus is on researching and analyzing previously existing or newly adopted regulations that relate to a specific situation or organization / institution establishing the legal order. An assumption is made, resulting from the legal culture, that the legislator has full and rationalized knowledge in the field of language and legal status, complemented by experience resulting from practice. The institutional-legal method in the information economy paradigm plays a double role:

- At the stage of creating law and lobbying for provisions that will serve the society and economic development. Although it cannot be ruled out that the use of professional lobbying methods will serve the particular interests of pressure groups, including those coming from abroad. Such reprehensible cases have occurred in many countries, especially in the so-called soft countries (Deszczyński, 2001, pp. 48–49).
- At the stage of interpretation and implementation of the already established law in the context of optimizing business decisions at different levels.

In the economics of information very helpful are the research procedures that were brought into the methodology by system analysis. Its use is especially advisable when the research subject is of an interdisciplinary nature, and this is what the economics of information is. For example, the world economy, as well as the economics of every separate state, is hugely affected by decisions made by the United States. This impact is greater the more the country’s economy is related to the American market and open to the world market. Good orientation in the functioning of the political system in the US allows to

predict the economic policy of the incumbent president, the US dollar exchange rate, whether the president will strive to liberalize trade and capital flows, or on the contrary, as in the case of President D.J. Trump, according to his slogan 'America first'. It should be emphasized here that one cannot apply automatism and thoughtlessness, as the US political system is also undergoing changes and what previously seemed certain no longer has such a quality. In the past, a coming to power of a republican president resulted in an increase in budget revenues despite lower taxes and an appreciation of the US dollar, with the reaganomics being a spectacular example. In turn, the victory of a Democratic Party candidate in a presidential election most often meant an increase in fiscalism, state budget expenditure, and weakening of the US dollar. This example shows the link between the system method and the historical method. The incumbency of a representative of the Democratic or Republican Party in the White House is no longer as unequivocal as it was in the past when it comes to the shape of economic policy. And so the Democrat William J.B. Clinton left an enormous budget surplus, and his successor, Republican George W. Bush, not only squandered it but indebted the United States on a scale unheard of in the history of this country.

In the system analysis, the classical Montesquieu's separation of state powers, but also its individual elements, are taken as elements of the system. The same situation applies to the analysis of the functioning of the economic system, broken down into levels, ranging from micro–micro – through micro–, meso–, macro–, and ending with megaeconomic. Thus, there are at least three levels of analysis: intersystemic, general – referring to the characteristics of the entire specific system, and detailed – explaining its elements. It is also necessary to take into account the interactions between systems and subsystems, as well as between subsystems on both political and economic level.

Case study naturally fits into the methodological aspects of the economics of information, as both were created for the needs of economic practice. Case analysis supplemented by the triangulation method is highly helpful in a situation where a problem needs to be solved in conditions of considerable uncertainty and the existence of many factors that are characterized by high variability and have an impact on making final decisions. We face such a situation in the everyday economic practice in the 21st century. The advantage of case study is the lack of methodological restrictions. In this case, qualitative methods complement each other with quantitative methods, creating a specific added value. As a result, it is more effective and efficient, which was already noticed when

it was used for the first time at Harvard Business School in 1914. Case study enables an in-depth, comprehensive analysis to a greater extent than the traditional quantitative analysis of variables alone, as it allows to actually discover what the results of quantitative research can only suggest. According to Yazan and Yin, no other method offers this possibility (Yazan, 2015, p. 138; Yin, 2014, pp. 3–27; Yin, 2015, pp. 41–49).

Therefore, it is not surprising that the importance of case study as a research method is constantly growing in the world. Western literature also points to its usefulness in the financial sector (Arfin, 1998, pp. 135–193). In turn, examples of the use of this method in Poland can be found not only in economics but also in political science, psychology, sociology, anthropology, accounting, entrepreneurship, education, evaluation, marketing, medicine, and administration (Dąbrowski, 2017, pp. 249–253). F.P. Seitel points to the usefulness of case analysis in a wide spectrum of communication as well. Each chapter of his work on public relations, which goes directly beyond the economics of information, ends consistently with a case study (Seitel, 2001, pp. 18–21, 42–47, 68–72, 98–102, 126–128, 148–152, 168–171, 196–199, 220–222, 245–248, 272–273, 294–296, 320–322, 350–354, 371–373, 394–395, 418–421, 442–445, 464–468, 488–489).²

This does not mean, however, that it is a flawless method because there is no such thing. The main objection against it is the lack of possibility of making generalizations based on one or more cases. The doubts are understandable since the sample selection, for obvious reasons, is then not representative. In case analysis, especially in the field of the economics of information, both the positivistic and phenomenological scientific paradigms are helpful, but the latter is nevertheless more significant. In the phenomenological paradigm one bases mainly on experience and knowledge of the researcher who, augmented with information resulting from his, or his team's, observations of the analyzed problem, makes his own interpretation. This kind of approach will always have a subjective dimension, which in science is *a priori* the basis for formulating an objection.

It is therefore necessary to stay humble and be aware that in social sciences, and especially in economic life in the 21st century, the *panta rhei* principle applies more than ever, that what is verifiable and acceptable today may turn out to be completely inadequate to reality tomorrow, or the assessment of what was previously considered appropriate may,

²His entire work *Practice of Public Relations* is basically one big case study and perhaps this should be considered an explanation for the fact that there were so many editions of it, as well as translations into other languages, including Polish in 2003.

with the passing of time, turn out to be a mistake. The person of Alan Greenspan can be used as an example here. As a young man, he was fascinated with econometric models to such an extent that, on the basis of their calculations, he thoughtlessly made decisions about functioning of his own company, which eventually went bankrupt. After he was designated on June 2, 1987 by President Ronald Reagan chairman of the Board of Governors of the Federal Reserve System, despite having the best analysts in the world he treated their expertise and calculations as one of many sources of information, keeping in mind the fate of his company. He relied primarily on his knowledge and experience, logical thinking. He was a pioneer in the application of the economics of information, even though it did not exist under that name at the time. For many years, he was considered the undisputed authority in the field of economics and monetary policy of the United States, almost an infallible man, which resulted in him being appointed the aforementioned position by subsequent US presidents: George H.W. Bush, William J.B. Clinton and George W. Bush. A. Greenspan retired as head of the Federal Reserve on January 31, 2006, and thus held this position for nearly two decades. After resigning from office, during a hearing before Congress on October 24, 2008, A. Greenspan admitted that it was his mistakes that contributed to the financial crisis, not recorded for many years, which had appeared in the United States and then spread to the entire world economy.

Conclusion

The economics of information emerged from the need of the economic practice. Thanks to it, economists have better, more relevant to reality analyzes of labor markets, capital, goods, and services, thus contributing to a more optimal use of the potential of companies, corporations, industries, economies of individual countries and the global economy. The economics of information is really just at the beginning of the road. For it to be more helpful, it is necessary to further systematize and develop it in such a way as to provide researchers and practitioners with methods and instruments for its implementation both in science and practice.

The content of chapter one was written several months before the outbreak of the pandemic. Its course, and above all the lack of proper information by the Chinese government and the Director General of the World Health Organization, Tedros Adhanom Ghebreyesus, of the governments of other countries and the international public opin-

ion, resulted in the rapid spread of the COVID-19 coronavirus in the conditions of such advanced globalization. The manner in which individual governments conveyed information about the scale of the threat, actions taken and the manner of their implementation to the public, owners, and management of companies should be equally criticized. All of this not only confirms the to-date importance of the economics of information but also makes it clear that, especially in such extreme conditions, honest, transparent, and not burdened with ad hoc political, superpower or electoral goals, consistent communication provided well in advance has a Shakespearean dimension of ‘to be or not to be’ – not only for the economy, a sector and an enterprise but for our civilization.

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II

The Economics of Information in Internal Communication of the Social Media Era

(JACEK TRĘBECKI)

Introduction

Behavioral economics has taken classical economics by storm, bringing a new perspective on economic decision-making. One of its main dimensions is the topic of the influence of information on these decisions, described on the basis of the information asymmetry theory (Deszczyński 2017). No wonder then that the domain of internal communication has also been in the area of interest. Internal communication is an often underestimated area of public relations. Its specificity lies in the fact that all communication interactions take place inside the company. Growing importance of this communication stems from three things.

The first one is the change of specifics of the employee-employer relationship. This change results both from the transformation of the attitudes of employees, especially the youngest, representing the Y generation, and from the expectations of employers who avoid being bound by permanent work ties with employees, preferring contracts of mandate or other forms of employment.

The second thing is the situation on the labor market. Extensive social programs, aging society, and on the other hand growing demand for labor, which cannot be compensated by transfers of employees from other markets, better organization of work or robotization, have resulted in the emergence of the employee market. As a result, employers are forced to intensively strive for employees, trying to gain their loyalty and commitment.

The third factor is the change in the specifics of work. The number of professions in which an employee has to perform his duties in the workplace is starting to shrink. Home office is just one effect of this process. Free movement of employees not only between individual companies but on a city or continent scale forces communication activities related to the need for organizing work in such a way as to win and maintain employee

loyalty despite the lack of a sense of identity which is usually created by a common workplace. An additional phenomenon is the increase in the number of employees who do not provide permanent work, but are rather hired for specific tasks.

The development of social media becomes a tool and a challenge for internal communication. The effect of popularizing broadband transmission and increasing the possibilities of electronic devices that support it – primarily smartphones – was the emergence of new ways of communicating in the form of social media.

The aim of this paper is to estimate the current state and perspectives of internal communication in the context of the development of information economics, especially in the light of the development of new media and the changes in work performance and communication between the employer and the employee related to it. The changes affect the specifics of organizational culture and may force a redefinition of the traditional perception of its dimensions.

2.1. The essence and specificity of internal communication

In classical definitions, public relations is seen as a function of managing communication between an entity and its environment (Grunig & Hunt, 1984; Wojcik, 2015). It is the specificity of an individual, their surroundings and a type of communication relations between them that determines the identification of public relations areas. From the point of view of a communicating unit, we can talk about personal PR when the entity is a natural person, corporate PR when it is an enterprise, government PR when it is a government, and investor relations when the recipient is an investor (Kaczmarek, 2016). On the other hand, however, if the recipient is the media, we speak of media relations (Golata, 2016), if it is an element of the environment having a strong impact on an individual (e.g. local or government administration), then we are dealing with Public Affairs, if lawmakers or legislative bodies – we can speak of lobbying. When communication takes place in a situation of conflict between the individual and the recipient, one can talk about crisis communication (Rydzak, 2016, Coombs & Holladay, 2012). When the sender and the receiver are separated by a border, we talk about international PR, when the division is cultural, we can talk about intercultural PR. In the case of internal communication, we are talking about a situation where both the sender and the recipient are within the same organization (institution, company, church, university, etc.).

The advantages of this kind of communication are the common cultural and organizational context, proximity and acquaintance of the subjects of communication, and communication procedures, tools and channels that have been developed. The disadvantages – primacy of informal communication channels, multitude of factors influencing interpretation of the message, and above all – a constant need to take into account any additional communication contexts arising from history or culture. While analyzing the issue on the grounds of information economics, one can notice the effectiveness and precision resulting from the knowledge of a target group. On the other hand, communication itself is much more multidimensional and it is difficult to channel it in one controllable tool or message (Trębecki, 2013).

2.2. The value of information in internal communication

The value of internal communication is not only based on the implementation of three key goals from the point of view of the company's relationship with the employee, i.e. activation, integration and employee motivation (Trębecki, 2016). Treating internal communication as one of the elements influencing the communication between the company or organization and the environment is equally important. It is essential to control – or at least monitor – the channels, a kind of windows through which information from inside the company reaches a wide audience. In traditional communication, someone who was looking for information on internal relations between employees and the company was basically doomed to official sources, i.e. materials generated by the enterprise itself through its own media (company newspapers, brochures and advertising materials, websites, advertising), organization of events or even sports or cultural sponsorship. Of course, there has always been an alternative source of getting feedback directly from employees. Obtaining such a feedback, however, requires considerable commitment and research. The development of modern media, especially social media, means that in the case of large and well-known companies gathering information on internal problems, employee relations or employees' opinions about superiors does not present any significant difficulties. Entering an inquiry in a form of company's name and a phrase 'work opinion' into the popular search engine Google results in dozens of records. Most often these are threads in popular forums or discussion groups. However, it is worth stressing the importance of the portal which was actually planned as an aggregator of opinions

about employers. The GoWork website, run by a company dealing with training and recruitment of employees, has become not so much a job search platform, but a place for exchanging opinions about employers, with a monthly number of visits at the level of 3.5 million unique users (*GoWork informacja*, 2018). The scale of the impact is evidenced by the fact that the portal in Poland has already collected 4 million comments. On the other hand, the specificity of these comments and the attitude of the companies that were the subject of them is shown by the number of over 100 court cases brought by companies who decided that the opinions of employees posted on the website violate their good (money.pl 2019). At the same time, the way of posting content and commenting on the site allows to treat GoWork as a social medium.

The awareness of the possibility of describing and publishing the relations and the work environment and the fact that such a description will have a strong influence on the perception of the company as an employer, and thus – on the decisions of potential employees, strongly determines the activities of companies. On the one hand, companies invest in manager training, emphasizing the issues of communication and relationships. On the other hand, however, they try to create an efficient internal communication that allows detecting irregularities before they become the subject of public inquiries.

Another part of the actions is the reactive attitude adopted when negative information has already been made public. Some companies try to take the legal path, trying to make the administrators of portals or social media block a negative entry. The chances of achieving that effect increase when the entry clearly violates someone's personal rights, e.g. contains personal data of the company manager. Another way is a dispute in the forum and an attempt to present the company's point of view. With rational and logical arguments, there is a chance to counterbalance the negative nature of the entry.

2.3. Traditional and modern tools of internal communication

Listing traditional and modern communication tools requires defining a clear criterion that enables a clear distinction. For the deliberation purposes, it can be assumed that such a criterion is the time in which a given tool was created. For the purposes of this article, it has been assumed that tools that were developed or spread after 2000 will be treated as modern. Their specificity lies in the fact that the genesis of their creation is most often associated with the development of information processing and transmitting

options. The first technological leap that took place at the turn of the century was the spread of computers connected to the internet. The second one was the development of mobile telephony, especially mobile devices, and the almost universal access to the broadband internet. This enabled the development of mailing lists, blogs and, finally, entire communication platforms referred to as social media. Although some of these tools, such as mailing lists or early computer communicators, were created before the year 2000, universal access to them became possible only in the first decade of the 21st century. It is worth mentioning that the 2000 cut-off is of a contractual nature. For instance, the concept of Web 2.0 (the net-based network that allows not only receiving, but also creating content by each recipient), which is the basis of social media, was first used in 2004 (Brown, 2009). The emergence of Web 2.0 enabled, as emphasized by Monika Kaczmarek, the use of two-way communication, which is the basis for a dialogue between the organization and its external and – what is important from the point of view of this publication – internal environment (Kaczmarek-Śliwińska, 2011).

The main feature of social media is the creation and exchange of generated content (Kaplan & Haenlein, 2010), or technically speaking, online forms and channels that enable dialogue and exchange of views (Scott, 2015). Kaczmarek-Śliwińska argues with this approach, stating that some users use social media passively, without generating new content and entering into dialogue (Kaczmarek-Śliwińska, 2013).

Kazanowski (2016) divided social media by function into:

- Social media for the publication (presentation) of opinions and views. This is the basic category of social media;
- Social media for sharing resources, including videos, photos, images, presentations, applications, etc. An example of such a resource is YouTube, Instagram or Slideshare;
- Social media focused on co-creation or cooperation. An example is sharing documents on Google Docs: users work on applications known from the offline world, such as text editors or presentation editors (Power Point); this way, often ad hoc, a closed community is created for a relatively short time to complete the task. This type of media is used to carry out official tasks that require close cooperation, but do not have to involve geographical proximity. It is an example of an answer to the challenge posed by remote working;
- Social media focused on building and maintaining relationships;

- Social media focused on communication and discussion. This category mainly includes forums, instant messaging and chats;
- Social media focused on current information and relating to news. These tools are mainly represented by microblogs, but also alert services.

A slightly modified but more modern classification was presented by Grzegorz Mazurek who defined the following types of social media (Mazurek, Korzyński & Górka, 2019):

- social networks (e.g. Facebook);
- websites for publishing / viewing videos (e.g. YouTube);
- websites for posting photos (e.g. Instagram, Pinterest, Flickr);
- websites / applications for a temporary publication of short videos or photos (e.g. Snapchat);
- blogs / microblogs (e.g. Twitter);
- professional, business social networks (e.g. LinkedIn);
- online forums and discussion groups.

The weakness of both classifications is the attempt to systematize the phenomenon that tends to converge noticeably. The source of it lies in the media owners' desire to retain users by implementing as many functions as possible. Therefore, the Google platform, created as a search engine for websites, has become an integrator enabling material sharing, joint work, calendar management, integration of contacts, e-mail, etc. Similar with the Facebook platform: it has grown from a simple integration platform into a system in which there is a communicator, the possibility of organizing events, generating content and sharing it. It is a way to keep and activate users. Kaczmarek-Śliwińska, on the basis of Forrester Research survey, distinguished the following types of social media users: real creators, commentators, critics, collectors, facade social workers, viewers and the idle (Kaczmarek-Śliwińska, 2011).

Social media make possible things such as improvement of two-way communication between different groups of employees, creating mobile group workplaces, coordinating dispersed project teams, enhancing knowledge sharing processes and exchanging experiences, they give the possibility of using modern training tools, increase employees' involvement in the affairs of the enterprise, enable learning about the structure of the employee community (networks of connections, informal leaders, etc.) and quick detection and reaction to social crisis situations in the company. The benefits of using Social

Media in the HRM area towards external recipients include the possibility of building (improving) the company's image as a good employer and facilitating recruitment procedures (Jędrych, 2018).

Despite those possibilities, the development of social media meets the two approaches described by Anna Miotk (2013):

- passive, in which companies 'just listen', without maintaining any active PR policy in social media; they monitor opinions about themselves and their brands, compare themselves with the competition, they also try to draw conclusions regarding internal communication, but they decide to react only occasionally – in crisis situations;
- active, in which companies 'listen and act'; These companies have a communication strategy in Social Media and actively implement it in order to introduce changes in products and services and in contacts with potential employees.

This classification can be supplemented by the third, decreasing category of companies that ignore the existence of social media altogether without even considering the potential that comes with it.

The specificity of the new internal communication tools can be traced by analyzing possible criteria for classifying channels and tools of internal communication: communication vector, communication channel, form of communication, degree of formalization, options of use, mode of communication, level of content control, degree of interactivity and the initiator of communication (Trębecki, 2016).

As for the internal communication vector, the tools of the communication are divided into three types: those concerning communication 'up' – from the employee to the company, the vector of parallel communication – when the company and the employee are in communication balance, and finally communication 'down' – when greater amount of information is directed to employees. In the case of social media, these are clearly tools in which the company remains in the position of an equal participant in the dialogue with employees. Alternatively, if the enterprise remains a passive observer, it may use social media as means of communicating upwards, collecting information about employees' moods and attitudes.

When it comes to a communication channel, social media operate entirely on an electronic channel, in which the medium is computer hardware and smartphones. Social media have no counterpart in traditional, analog media.

As far as the form of communication is concerned, social media are less and less frequently a platform for generating and exchanging texts themselves. Popularization of broadband connection enables the transfer of images (including memes) as well as films, including those transmitted directly. As a result, social media are no longer just a forum for discussion and are beginning to become a source of information similar to traditional television, in which the low quality of the message is compensated for by its authenticity, attractiveness and brevity.

Social media are an informal tool, not covered by organizational forms, they follow simple rules defined by the creators of a given medium or, often, arbitrary decisions of administrators of each medium. Although both administrators and owners of a given medium more and more frequently interfere with content perceived as promoting racial hatred, homophobia or violence, artificial intelligence algorithms that allow automatic detection of this type of content are still imperfect. Hence, most often such interventions take place only after the incident is reported by users.

An interesting criterion for classifying social media is the option of usage. According to this criterion, employees must use a given communication channel (obligatory medium), they can use it (optional medium) or, in some cases, the medium is prohibitive, i.e. using it is met with reluctance by the employer. Social media can be classified as optional, and in the case of some media (GoWork) – as prohibitive in the sense that employers may exert pressure on the author of a negative post or even take legal action.

The option of use is a criterion indicated by Krystyna Wojcik when writing about constant and current tools (Wojcik, 2015). In the case of social media, there is a specific mix: the medium in the form of Facebook or LinkedIn platforms is used constantly, but matters relating to the company appear in it rather occasionally, regarding a problem, some special event or a new situation. The medium then serves as a source of information and a platform for interpretation, but also as a forum for forming opinions and making decisions about possible actions.

In terms of the degree of content control, social media leave little scope for content control in the company's response to employee communication. The ease of hiding one's identity by employees using social media and the sense of impunity associated with anonymity evokes, when combined with frustration, the phenomenon of hate. In such situations one can try formal paths and, in justified cases, indicate violations of the regulations and rules of a given forum. Other possible reaction,

riskier in dealing with hatred, is joining the discussion in order to present one's point of view.

The last criterion is the interactivity of a given medium, understood as the possibility of providing feedback and joining the discussion. Social medium is fundamentally based on interactivity, the possibility of expressing one's emotional attitude, commenting, and passing on information, which is one of the main sources of its popularity.

The analysis of social media as an internal communication tool with the use of individual classification criteria allows to define the main sources of problems related to the use of such media. These are electronic media that enable the transfer of information in any form, prevent from the takeover of the communication initiative, and prevent the company from forming a clear message. At the same time, they are informal media, operating outside the structures of the company, with great interactivity and low predictability when it comes to the possible range of information.

When confronting such a medium, companies use several tactics. One of them is generating company's own means of communication, which enables a tighter control. An example of such a medium is the French Yammer which is a paid social platform integrating communication within the organization. The great advantage of this type of platform is simple integration with business applications such as calendar, text editors, etc. Moreover, this feature means that, in regards to the option of use, the platform theoretically is optional, but the fact that using it is a condition for access to work applications makes it *de facto* an obligatory application that employees must use. Another tactic is to try to use publicly available social media and create company profile for internal communication. This makes it possible to administer comments, hide particularly negative posts and control the message to some extent. The third method, mentioned by Miotk, is to treat social media only as an indicator that allows to get to know the expectations of employees, their moods, sources of anxiety and fears in a non-invasive way.

Theoretically, the explosion of social media should lead to their dissemination also in internal communication. Such a path is being predicted by Grzegorz Mazurek (Mazurek, 2016). However, as shown by the results of research conducted in 2015 by Elżbieta Jędrych on a sample of over 2010 Polish companies, the potential of social media is used carefully by enterprises. Only 37% of them used such media in their activities. Of these, almost 80% treat these media as a marketing channel, but as many as 30% see them as a potential for internal communication. Companies using social media generally used two

channels: Facebook (83%) and YouTube (62%). What is striking in the research results is the lack of strategies and efforts to measure the effects of actions declared by the respondents (Jędrych, 2018). Perhaps the most important communication challenge faced by enterprises is the economics of attention described by Simon (Kreft, 2009). It is based on the assumption that in the growing amount of information it is the attention of the recipient that becomes a scarce commodity that enterprises will fight for. The measurement tools existing on social media allow one to assess and pay for the ability to attract the attention of Internet users.

Conclusions

Social media are becoming a new tool for internal communication. Their use coincides with changes in the labor market and employee expectations and affects not only the inside of the company (increasing efficiency, speed, interactivity, communication openness, increasing employee engagement, the possibility of new forms of work: remote, task sharing), but also its environment (building the image of a good employer, recruitment efficiency). However, some features of social media, especially low control over content, user reactions and susceptibility to hate, mean that despite the implementation of their own social media by companies the potential of these media is still not fully used. Nonetheless, internal communication is probably facing the same revolution that has happened in classic marketing.

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III

Changes in Access to Information in Crisis Situations

(WALDEMAR RYDZAK)

Introduction

The aim of this chapter is to start a discussion about the role of information on the modern market which is more and more often discussed in the context of the fourth, digital wave of development, hugely influenced by the mass media and the Internet. In order to define the directions of possible changes in the field of information exchange between enterprises and their stakeholders or – more broadly – the market in crisis situations, especially in the context of the situation related to COVID, the scientific views presented and commented on in the article are confronted with the achievements of the Poznań school of economic PR and the results of the latest research carried out by the Poznań center.

The topicality of the issue of information (including economic information) in the media and its impact on the functioning of national economies or enterprises remains indisputable (Andrzejczak, 2012; Deszczyński, 2017; Świerczyńska, 2019; Leszczyński, 2019; Rydzak 2020). The number of problem situations in economy, which are rooted in incorrect or false information, is increasing. Nearly 70% of people are afraid of the negative effects of false information, and almost 60% cannot distinguish between false and real information (Edelman Trust Barometer, 2018). Lockdown and the spread of remote work cause an increased demand of stakeholders for information, in particular instructional information. A review of the literature on the subject leads to the conclusion that although the number of scientific publications devoted to the role and quality of information has increased in recent years, scientific considerations are conducted in the field of media studies, communication sciences or sociology. In Poland the subject of economic information in the context of information economics is dealt with by, inter alia, J. Fazlagic, S. Forlicz, J. Oleński, D. Dziuba, A. Czerwiński. However, only a few works refer to the information and information economics considered in the public relations paradigm, and even less is related to the subject of information in crisis situations.

These are mainly publications of the Poznań economic public relations school, developed as part of scientific and research work. The representatives of this school include P. Deszczyński, K. Golata, J. Trębecki, W. Rydzak, K. Świerczyńska and M. Leszczyński. The founder of this school – R. Ławniczak – has permanently introduced the concept of transformational PR into international literature. The main area of analysis and research of this concept is information and its special role in the political and economic changes that took place after 1989 in Poland. Each subsequent crisis experienced by economic entities had an impact on changes in the ways enterprises communicate with the socio-economic environment. The considerations contained in this chapter are a voice in the discussion that encourages reflection on the directions of changes in the scope and access to information after the COVID epidemic is extinguished.

3.1. The role of information in economy

The role of information in the market economy is not strictly defined and assigned to only one area (Rydzak, 2020). Many scientists have different views on the nature and importance of information in economics (Wilson, 2000). The precursors of the information economics are, inter alia, A.F. von Hayek and G.J. Stigler (after: Żelazny, 2014; Deszczyński, 2017). Hayek in his article *The Use of Knowledge in Society* pointed out that knowledge is scattered. It does not exist in a concentrated form, but as individual bits of partially contradictory information scattered throughout a society. One might be tempted and after more than 70 years of formulating these assumptions try to show that the development of the Internet breaks these limitations, but analyzing the way the global information network works leads to the conclusion that despite the apparent ease of access to the interface, access to knowledge, or rather information, it is still difficult, and knowledge remains scattered, although certainly one of the barriers – geographic – has become blurred. Hayek recognized that the price system is, in terms of correctness, a key carrier of information about the scarcity of goods. In the 1960s, G.J. Stigler presented a concept in which he assumed that the existence of price spreads is the result of insufficient information on the part of entities operating in the market. Thus, the price of the good established by the producer may include a false assessment of the rarity of this good. The concept of Stigler was analyzed by J.E. Stiglitz, who pointed out some inaccuracies in his assumptions. On the one hand, incurring certain costs, one assumed

the possibility of obtaining information that would reduce the level of ignorance to an acceptable level, on the other hand, they treated this expenditure as a cost, and not a type of investment in the entity's knowledge. The ineffectiveness of the information market and the resulting asymmetry cause a demand for information which some entities decide to obtain for a fee.¹

J. Stiglitz (2017) considers information to be a public good, at the same time pointing to its characteristic feature, i.e. the lack of marginal costs. As part of his concept, he indicates that markets are not effective in providing information to all entities operating in the market equally. According to him, this contributes to the creation of barriers disrupting the functioning of the economy. Żelazny (2014), on the basis of Stiglitz's thesis on the creation of information problems by market participants, formulates the conclusion that potential information asymmetry is not the result of a malfunctioning market mechanism (evidence of its inefficiency), but evidence of deliberate actions of entities operating in it, which consciously strive to such a state in order to gain a market advantage. However, such a behavior should not be seen in purely negative categories (as a negative selection), where the main motive is to conceal negative information. Information asymmetry may also result from the desire to maintain an advantage on the market on the basis of know-how or patent rights.

Referring to J. Stiglitz's assumption of lack of marginal costs, it can be stated that it is debatable.² One has to imagine a situation in which market players want to engage consciously in a removal of the barriers mentioned by Stiglitz. Such actions of entities operating on the market will entail additional costs also in the further stages of distributing information to various groups of stakeholders. The reduction of costs does not have to tend to zero as much as Stiglitz assumes. In his article information is treated, after J. Hamilton, as a multidimensional good with the features of a public good, characterized by a high level of differentiation, as well as high fixed costs and low variable costs (2004).

¹ At the same time, an interesting assumption is made by many Polish researchers that in markets with imperfect information the role of information of some kind is played not by the knowledge about a subject or an object of a transaction, but by actions and choices made in relation to them by other market entities. This issue will be referred to in the section devoted to information economics in the public relations paradigm.

² It is worth noting that diverse audiences and their different expectations sometimes require some expenditure related to the adaptation of information e.g. to different possibilities of information perception within individual groups of recipients, assuming, of course, that the subject – the information creator, for instance a company – consciously uses its resources for the perception of information and its effectiveness to be at a similar level in each group of stakeholders.

Looking for an answer to the question of how to eliminate the existing imbalance in access to information and the disturbances that it causes (the phenomena of moral hazard and negative selection – hiding information),³ J.S. Stiglitz and M. Spence in their publications pointed out the possibility of self-selection (Stiglitz, 1982) and signaling and screening (Spence, 1973). O'Reilly (1983) in his considerations indicated that the manner and scope of information use are influenced by many factors, regarding both information itself (e.g. its quality, availability, form, credibility, distribution method, planned use) and its recipient (e.g. his perception of the information, the way it is processed, previously acquired knowledge).

When analyzing information in terms of the way it is used, it is necessary to define the function that the information will fulfill in relation to the entity operating on the market. According to Gola (2016), if obtaining information is an end in itself, it will only have a consumptive function. A feature of economic information is its function supporting the choices of economic entities in terms of goals and the manner of achieving them. In the case of assumptions made by Gola it is understood quite narrowly, and with such an approach, an additional division of information should be introduced – into investment information and persuasive information. The function of the latter will be to persuade the market participant to behave as desired by the sender. In this context, it differs significantly from the assumptions of economic information. The persuasive function of information refers directly to the assumptions of transformational public relations, where it is assumed that the role of information was to convince the society to a new model of economy – the market economy, and in the neoliberal version. Having information as an investment can become an end in itself. It is true that the buyer consumes information, but it does not necessarily have to be related to the satisfaction of his main need which would be an investment of capital. In such a situation, consumption occurs spontaneously as a result of contact with information, it does not consume this information.⁴ The function of investment information is not to satisfy a consumption

³ Described by G.A. Akerlof as part of a publication devoted to the behavior of car dealers on the market.

⁴ The view about not using information during consumption, reproduction and distribution can also be found in Rafal Żelazny's publication (2014). It is worth mentioning at this point that the author of this assumption omits such important elements as information noise, which appears in the process of information exchange. Thus, just as in the case of the assumptions about perfect information, here too some constant or assumptions about the characteristics of information do not fully reflect its character.

need, but to store value. In this sense, the investment function of information brings us closer to economic information, but it does not have its main feature, i.e. it is not acquired to support a choice. Against the background of these considerations, one cannot ignore the last type of information indicated by Gola, i.e. long-term information, the function of which is to support the absorption of economic information. As an example may serve information obtained in the course of study or research. Its acquisition may take a long time, it does not have a direct usage and its value is shown in the moment of appearance of economic information. It can be called a specific decrypting key, for example a knowledge of economics acquired by learners can be used in practice to analyze the conditions for granting and repaying a mortgage (economic information).

Apart from factors related to the character of the information, the analysis of issues connected to information and its impact cannot, of course, be conducted without taking into consideration its receiver. The recipient's perception of information is not an exact reflection of the author's perception of the same information (Goban-Klas, 2001). O'Reilly's proposals should be complemented by issues related to emotions and their influence on shaping attitudes and behaviors (behavioral approach). Economic information, like any other information, may consist of two layers: rational and emotional (e.g. numerical data and their initial interpretation / value imposed by the sender). Rational information may or may not contain an emotional charge, just as emotional information does not need to contain information related to facts/data. In a purely rational form, the information may come in three variants: technical information (e.g. what, when), instructional information (regarding recommended attitudes or behaviors, e.g. buy, sell, do not buy, do not sell) and a mixture of technical and instructional information (Rydzak, 2011). The effectiveness of particular types of information has been discussed for many years, and the conclusions from reading scientific publications can be reduced to a short ascertainment: the effectiveness of information depends on many factors, and the emotional component in some situations will have a dominant influence (e.g. in the initial phase of a crisis situation). Marcus and Goodman (1991) claim that emotional information is more effective than instructional information. Marcus and Goodman (1991) argue that emotional information is more effective than instructional information. Siomkos et al. (1993) found that the effectiveness of the emotional layer depends on its 'emotional load', and the experiment of Choi and Lin (2009) showed that the effectiveness of the reception of the emotional layer depends not so much on the load as on the type of emotion

(differentiating emotions into dependent on and independent from attribution) and the recipient himself. In a similar vein, K. Golata shows in his analyzes that the perception of economy and people working in it is an important element influencing the perception of economic information⁵ (Golata, 2009; 2014). Opposing evidence is provided by earlier observations and studies by Egelhoff and Sen (1992), who show greater effectiveness of instructional information. Differences in the presented research results indicate the existence of additional factors which may influence the effectiveness of the impact of individual layers (emotional or rational) and which emerged along with the development of the Internet and a mass access to various types of information sources. Technological development and digitization have made it possible for the information on the market to be transferred both directly between entities and through digital intermediaries. It should be emphasized that the influence of the media and information transmitted through them on peoples' decisions and attitudes as well as their market behavior has been out of discussion for many years (Gerbner et al., 1986). The recipient of the media, including every entity operating in the market, searches for information and makes decisions based on it (Allan, 2006; Jabłoński, 2006), however the development of new media, with the significant presence of the so-called classical media (press, radio, television), causes blurring of the existing differences and hybridization of the information message. The possibilities of interaction and active participation of Internet users in creating content reduce, in most cases, the costs of creating and distributing information (Janicka, 2012), but they also create threats related to falsifying information, which may increase the cost of it. It should be remembered that some members of the society, due to their age and skills, are not active in the circulation of information in the Internet at a level similar to the activity of younger generations. Because of that, the phenomenon of digital exclusion may occur due to the selection of channels of information distribution and its unavailability for selected social groups. In the case of a COVID-related situation, digital exclusion may apply not only to the elderly, but also to people without access to infrastructure (e.g. due to lack of computers and adequate infrastructure at home).

⁵ K. Golata points to certain burdens on people who functioned in a centrally planned economy. Some of them have a negative approach to private property and a low level of trust in the free market and capitalists – business owners. Their attitudes are shaped not by rational premises, but by general aversion formed mainly on the basis of various emotions.

3.2. Quality of information – chances and threats

Low quality of information increases costs of functioning of entities on the market, e.g. extends the time needed to conclude a transaction, increases the involvement of resources in searching for information, and causes a risk of crisis situations. False information lowers trust and worsens the reputation of countries, markets or individual companies. This may lead to a temporary loss of credibility in the international financial/commodity markets, or – on a smaller scale – to a loss of trust and a decline in the value of individual companies (e.g. a sharp sell-off in the stock market). According to the research by J. Fazlagic (2015), in 2015 low trust cost the Polish economy 281 billion zlotys in lost profits (approx. 13% of GDP). The shown scale of costs allows for a preliminary thesis that in extreme cases false information may lead to panic and result in bankruptcies or crises of entire sectors of the economy. In the first phase of the COVID pandemic, lack in information management at the level of individual governments was clearly observable. In Poland, in the initial stage, the information directed by government agencies to the socio-economic environment was distributed through various sources, but it lacked coherence, sometimes was showing contradictions, and it lacked detailed data allowing for an appropriate response from individual groups of the environment. An example may be the situation of entrepreneurs who received limited information on regulations related to their industries, which resulted in a limited possibility of planning and implementing business solutions that would allow for adjustment to the current legal and economic situation. Due to the digitization and democratization of the media, as well as the free flow of information, information risks are currently related not only to the loss of trust or reputation. With the development of electronic media, enterprises and politicians must reckon with the fact that information on the market may affect the very existence of particular institutions (legitimation / acceptance of market institutions). The new technology provides for the possibility of easy, quick and low-cost engagement in criticism of the actions (of both individual enterprises and entire industries or national economies) of a large number of stakeholders. Most of them have so far remained inactive on the market, e.g. due to the existing geographic or technical and technological barriers. Current changes in technology weaken these barriers, although do not remove them completely. The development of communication channels via the Internet, despite the democratization and apparent openness of this medium, does not guarantee equal participation in the discussion for all entities. At most, it creates opportunities and possibilities in this regard.

As an evidence of lack of full democratization of information exchange on the Internet may serve e.g. closed groups or forums where the exchange of information between individual market participants takes place with the exclusion of selected entities, e.g. enterprises, which are the subject of assessment / criticism.⁶ The ‘Youth for Climate’ strikes and a number of other initiatives provide evidence of progressing democratization of a dialogue between representatives of the broadly understood business and the social environment. Increased awareness of environmental costs (most often classified as external costs) that are associated with maintaining high, constant economic growth measured by GDP (this is currently the dominant paradigm in economy; see Gomulka, 2016) and innovativeness⁷ promoted in the EU stimulate self-organization of social environments. More and more often they question the current economic order and try to persuade politicians to introduce changes in regulations concerning the functioning of individual industries or entire national / supranational economies. From this perspective, one can risk a statement that economic sciences, due to the dominance of mainstream concepts in the mass media, which strongly emphasize the lack of alternatives to the current form of socio-economic development, are experiencing their own crisis of credibility.

The rapid emergence of negative phenomena in the economy is caused not only by the low quality of information or false content, but also by the high trust of the environment in the opinions of ordinary Internet users. It is at a level comparable to the trust in the opinion of independent experts (Edelman Trust Barometer, 2017). Easy access to information and the speed of its dissemination in electronic media are not only advantages but also disadvantages. The intensity, quantity, and speed of exchange can interfere with its reception, selection, and understanding. Negative information, however, not always reaches all entities in its social and business environment and has negative effects (Rydzak, 2016). To a large extent, the selection and display of information are now determined by algorithms used by providers of various services. Google has algorithms for searching for information on the Internet, and Facebook uses algorithms to ‘arrange’ the content of posts into an individual newsfeed for each user of this portal. The problem of the possibility of manipulating the attitudes and behaviors of Internet users was no-

⁶ The decision to admit to a group is often up to the administrator. Facebook launched the function of joining the group via the company’s fanpage in 2019, although it is not available to all groups in the service.

⁷ It is not the main economic goal, but only a way of reaching growth and economic development satisfying for shareholders / owners.

ticed by the European Union, which took legal action against e.g. Google. What is questioned is the search engine algorithm provided by this corporation, which, according to specialists, intentionally displays information / content that the corporation prefers (e.g. paid). However, it should be remembered that the impact is discreet, as the lack of a link between the searched topic and the received content would result in a massive resignation from the Google search engine, and this is not the case.

3.3. Changes in the formation and circulation of information – the importance of AI

With the spread of the Internet and artificial intelligence, the 'many-to-many' communication model will not by default mean 'many people'. Part of the communication in this model will take place at the human – bot, people – bot, bot – bot, people – bot – bot – people level, and in this respect there are many challenges of not only technical and technological nature, but also in terms of communication and ethics (Rydzak, 2020). At the current stage of technological development, the most common are bots that base their activity on human-prepared algorithms. It was the man who programmed the patterns of their 'thinking' and 'reaction' and prepared information kits to be used during the dialogue. Along with the development of AI, however, we inevitably head to the point where a human specialist will only initiate the process, and further algorithms will be created without his participation (except for periodic supervision). Most of the considerations that J. Grunig carries out as part of his model of symmetrical communication, he relates to activity between people. This is not an accusation to its author. At the time of the development of these models, the level of digitization of communication was negligible, and robotization and AI were the subject of sci-fi publications. However, digitization, technological progress and the spread of AI force opening a discussions on updating Grunig's concept and his four communication models. It was created decades ago and the proposed four models slowly cease to fully reflect the present, highly digital reality, or rather do not take into account the impact of technical and technological changes on socio-economic changes and the ways of information exchange between people.

The need to update the existing concepts can be observed, for example, in relation to information activities in problem or crisis situations (Tworzydło and Szuba, 2019). Due

to easy access to information on the Internet and the possibility of publishing own opinions / comments, Internet users are becoming more and more active and critical. When looking for information, they interact with bloggers, social journalists or other influencers who may or may not have a high level of substantive knowledge, but have a large influence on the behavior of Internet users. Low level of trust in information coming from one source, in particular located in the enterprise (e.g. departments responsible for communication), combined with the growing importance of external entities, should stimulate a greater variety of information sources on the part of enterprises – a kind of internal ‘multi-sourcedness’. It involves engaging in a dialogue with the environment a greater number of employees of enterprises, who, however, are not full-time employees of communication departments, occupying different positions in the structure of enterprises. The existing concepts in the field of information activities indicated too high risk of such an open approach and recommended keeping the communication process within one, dedicated to this department / division / unit. The task of such a department was collecting information from inside the company, its development and distribution outside. Obviously, the process was two-sided, hence the additional function of the communication department was to obtain feedback on company’s own activities and to collect information on similar activities undertaken by other companies or institutions. Increased acceptance of the information activity of various entities within the enterprise creates additional risks. They are related to maintaining the communication coherence of companies (controlling the process of creating, distributing and obtaining feedback) and errors resulting from the inability to conduct a dialogue with the environment by people without the required skills and experience. The departments responsible for communication in enterprises may receive a number of new competences / responsibilities in the near future. Their activity may be associated not only with the preparation and distribution of messages or conducting a dialogue with the environment, but as part of internal communication, greater involvement in improving the soft skills of employees employed in enterprises. The aim of this type of action will be to use the increased potential of the enterprise for multi-source and multi-channel communication. Therefore, increasing the competences of the managerial staff and other employees in soft areas becomes one of the major challenges of communication departments, no less than the subsequent use of this potential as part of the development of information activities carried out in the conditions of progressive automation of content creation and its distribution. The use of

artificial intelligence to accelerate and relieve the usually small departments responsible for enterprises' communication with the environment is one of the possible directions of changes in the area of enterprise communication. Important, but not the only one. The delegation of rights can be carried out simultaneously with involvement of external entities – unique fans of the company – in the process of creating and distributing information. Based on the conclusions of the ECM 2019 study, it can be concluded that communication specialists see the positive potential of this type of synergy. Resignation from excessive control and limiting the number of people communicating on behalf of the company (advocacy of interests, also of a social nature) has many advantages in the period of stable growth of the company. The number of scientific studies indicating the legitimacy of such an approach is growing year by year. However, there are few or even very few studies relating to communication in crisis situations, which *a priori* assume increased control of information flow.

3.4. Stakeholders' access to information in crisis situations

Stakeholders of market entities to some extent always look for information about them. In the case of crisis situations the demand for information increases. The COVID epidemic has triggered not only the demand for information related to this disease and ways of its treatment. Due to the limitations, there has been a huge demand for business information, for example about temporary regulations imposed on industries by individual governments. The more the effects or the sense of threat are felt by individual stakeholder groups, the greater their activity in obtaining information. People trust their experience and try to match current events with patterns they already know. At this stage, the opinion is built not only on facts, but also on the emotions one feels. In the emotional phase the rationality of the assessment of information about the event is very limited, and any evidence that questions the previous information reduces the credibility of the information sender. During this period, the environment tries to ignore information that contradicts its assessment (Coombs and Holladay, 2001, 2003). Therefore, it should be assumed that in the emotional phase of a crisis situation, reacting too quickly and providing overly extensive information to the environment, before knowing all the facts, may lead to an escalation of the crisis situation. Thus, the supply of information should be selective. Most of the concepts of information activities in crisis situations are based on the situational crisis

communication theory by T.W. Coombs (2007) and the concept of image restoration theory (IRT) by W. Benoit (Benoit, 2003, p. 266). In those theories, the information behavior of enterprises is reactive. Information is prepared and communicated to the environment in response to the emergence of expectations in this regard or negative publications in the media. The reactive actions of companies, combined with the tendency of the media to publish information quickly, without detailed verification, means that the initial messages in the media, influencing emotions and shaping opinions, can be constructed mainly on the basis of information that is factually wrong. There may be attempts to correct such an opinion, but it requires the involvement of more resources than in the situation when information activities are carried out while the initial opinion is being formed. Knowledge about the information behavior of Polish enterprises in crisis situations is provided by the results of research carried out by W. Rydzak (2018) among companies that have continued their activities over the last 20 years.⁸ Almost 58% of them have experienced a crisis. However, taking into account 370 companies that are no longer on the market but participated in the first edition of the research in 1998 (the initial survey embraced 1100 companies), over the last 20 years various types of crisis affected almost 72% of enterprises. The types of situations considered by enterprises as crisis events are presented in Tab. 1.

Tab. 1. Circumstances seen as a crisis situation by enterprises

N=156	Percentage of observations
Bad financial situation / loss of liquidity	76,9
Market collapse	51,3
Fall in sales / orders	48,7
Loss / dissatisfaction of customers	38,5
Random events having a negative impact on the company	38,5
Negative opinion about the company	35,9
Breakdowns	35,9

⁸ This is the third edition of research carried out every decade among the same companies. The obtained results are unique because the conclusions refer to the changes that have taken place in the approach to communication of the same enterprises with their stakeholders over the last 20 years. In 1998, the first research was carried out among 1100 enterprises that were included in the ranking of the largest 500 commercial enterprises, 500 largest production companies and 100 largest state-owned companies. In 2008, the second round of the research was carried out, and in 2018 – the third. As a result of market changes, acquisitions, mergers or collapses, the initial number of 1,100 companies was reduced to 730 companies. The final number of completed questionnaires qualified for the analysis in 2018 was N=156.

Unfavorable information in the media / social media	33,3
Losing market share to competition	24,4
Defective product / poor product quality	23,1
Deterioration of trust in the company	20,5
Other situation (what?)	3,8

Source: own research.

Tab. 2. Negative effects of the crisis for enterprises

N=90	Percentage of observations
Deterioration of the company's financial result	64,4
Decline in sales of a product or service	48,9
Excessive employee involvement, disrupting the normal functioning of the company	46,7
Deterioration of the company's image	42,2
Loss of market share	42,2
Decline in confidence in the company	33,3
Difficulties in recruiting new employees	26,7
Claims for damages	24,4
Decline in stock prices / goodwill	22,2
Introduction of new, restrictive legal regulations	17,8
No negative effects caused	2,2
I do not know	2,2

Source: own research.

What dominates is the typical approach, i.e. situations that have a negative impact on finances and sales. Over 57% of the companies surveyed in 2018 that declared that they had experienced a crisis, indicated multiple occurrences of crisis events. The main negative effect of the crisis was the deterioration of the company's financial situation (Table 2). At the same time, over 67% of respondents indicated that the crisis situations had also positive aspects for them.

The research results are not entirely consistent with the scientists' assumptions regarding the recommended pattern of conduct. The selective adjustment of enterprises to the speed of information flow and digital information distribution is noticeable. There are slight deviations in individual areas. Enterprises, having a choice of the method of

carrying out information activities, in most cases would either decide to undertake information activities only towards selected stakeholder groups, or would stop at providing information on explicit request. Openness and active information measures addressed to all stakeholder groups, i.e. the strategy that is described in the literature as the best, ranks only in third place in the manner of conducting dialogue with the environment preferred by enterprises (Tab. 3 and Tab. 4).

Tab. 3. Information activities undertaken by enterprises in crisis situations

Undertaken information activities	Percentage of observations
On its own initiative, it informs selected groups of stakeholders until the interest disappears	65,8
It provides information to individuals and institutions only at their explicit request	63,0
On its own initiative, it informs the whole environment openly until the interest disappears	35,6
It remains silent	23,3
It provides a number of contradictory information, creating information noise	17,8
Undertakes other activities (what?)	6,8

Source: own research.

Tab. 4. The level of preference for selecting information activities undertaken by companies (1 – least desirable to 5 – most desirable, within the framework of previously indicated activities)

	Average
On its own initiative, it informs selected groups of stakeholders until the interest disappears	3.91
It provides information to individuals and institutions only at their explicit request	3.57
On its own initiative, it informs the whole environment openly until the interest disappears	3.40
It remains silent	1.69
It provides a number of contradictory information, creating information noise	1.38

Source: own research.

Tab. 5. Assessment of effectiveness (on a scale of 1 to 10)

	Average
On its own initiative, it informs selected groups of stakeholders until the interest disappears	7.26
It provides information to individuals and institutions only at their explicit request	6.92
On its own initiative, it informs the whole environment openly until the interest disappears	6.81
It remains silent	4.36
It provides a number of contradictory information, creating information noise	2.42

Source: own research.

Table 6. Preferences for the selection of stakeholder groups with whom the company will communicate in crisis situations

Who do enterprises communicate with	Percentage of observations
Company employees	88.9
Customers	80.6
Cooperating companies	75.0
Shareholders	72.2
Local community	45.8
Internet media	44.4
Internet community via the social media	41.7
Press	40.3
Government organizations	38.9
Local authorities	37.5
Regional community	36.1
Community in general	34.7
Persons / institutions shaping public opinion	33.3
Other groups	8.3

Source: own research.

The declared effectiveness of such an approach seems to be the main reason for selective communication with particular groups of the environment (Tab. 6). In the opinion of representatives of enterprises, it is the highest among possible methods of communicating with stakeholders. At the same time, it is consistent with one of the assumptions of effective management in crisis situations, which is often omitted in research on corporate communication strategies, and in which it is assumed that minimizing the costs of a crisis situation requires a verbal reduction of the scale of a crisis situ-

ation – so-called framing (Rydzak, 2011). Companies try to reduce the negative impact of information about a crisis situation in the enterprise on its operational activity not only through smaller information openness as such but also through a greater selectivity of stakeholder groups with whom they want to contact. Based on the results of the research, it can be assumed that enterprises prefer to communicate with the closest groups of stakeholders, and only if necessary, they extend the range of information distribution outside these close circles. When assessing the declared attitudes of enterprises from the perspective of the COVID pandemic, a conclusion can be drawn that they are well adjusted to the situation. Selective openness reduces the creation of distortions in the reception of information, at the same time meeting the information needs of stakeholder groups of the greatest importance to the enterprise. Online media is in the middle of the pack when it comes to giving priority to information, but it is still ahead of classic media and opinion leaders.

As one can see, the development of the Internet changes the way companies communicate with the environment, but it has not dominated other forms of contact and information exchange. In the context of the survey results, it seems that companies prefer communication without intermediaries, and the digital dialogue forced by COVID is treated only in terms of ‘coercion’. Perhaps this is due to concerns about distortions in the information provided. In the absence of personal contact, the sender of the information cannot observe the recipient, e.g. in terms of his reaction to the information. However, immediate feedback, also at the level of non-verbal communication, can be used to introduce the necessary corrections in business strategies, as well as in communication strategies and methods of constructing / transmitting information. Based on the data presented in this chapter, it is difficult to unequivocally formulate a conclusion that one of the factors determining the activity of companies is the cost of reaching particular groups of stakeholders. This would require additional research. However, the data presented in Tab. 6 and the researcher’s intuition suggest that this hypothesis has a good chance of being positively verified.

Conclusions

The globalization of economic processes, digitization and media convergence have increased the role of information in the modern economy. Information has become an indispensable catalyst for processes, a desired commodity and a means of payment at the same time. Access to information builds a competitive advantage in the market and in some cases creates value in itself. The development of the Internet, the disappearance of geographic barriers in the exchange of information and the level of dependency in the global economy intuitively indicate an increase in the risks associated with incorrect circulation and quality of information. But what is weakness is also an opportunity. A large amount of information available on the Internet, difficulties in its selection, lack of time to consume information, high saturation of the information market with negative and false messages mean that the risk of permanent and large negative changes in enterprises remains at an acceptable level (Rydzak 2020). When analyzing the scientific achievements developed in the field of the economics of information, it should be emphasized that despite the undoubted advantages of limiting the research field, it is worth looking for scientific problems that can be analyzed within various areas of information economics simultaneously. Such an approach should contribute to a better understanding of the mechanisms of information impact on the market. In the opinion of the author of this article, research into the impact of reputation on the behavior of entities in the markets fits this postulate very well. Computerization, digitization and automation of the creation and distribution of information may be the subject of considerations in the field of information economics. Media hybridization and multidimensional models of information exchange on the Internet, taking into account the development of the social media, are issues that can be considered in the context of the information economy. The process of reception, perception and processing of information, e.g. under conditions of strong stress or negative emotions that usually accompany people in crisis situations, and meeting expectations are issues that can be analyzed within the framework of infonomics. The behavior of economic entities or institutions under the influence of uncertainty resulting from the lack of information in crisis situations are matters that can be successfully attributed to the issues of the economics of imperfect information.

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IV

The Economics of Information as an Instrument of Legitimation of the European Union

(FILIP KACZMAREK)

Introduction

The economics of information is becoming one of the most important branches of modern economics. Information influences the economy and economic decisions around the world and therefore also in the European Union. Thanks to information economics ‘the economists have better, more adequate to reality analyzes (...)’ (Deszczyński, 2017, p. 58). The EU is, in turn, presented as an example of advanced regional integration. That is why the EU is a good territory to analyze the way of optimizing information in an integration group.

In the case of the European Union, information is used not only in the decision-making process, but also to justify the decision taken. The aim of the text is to analyze whether information on opportunity costs, particularly those that are developed under the cost of non-Europe concept, is used as an instrument of legitimizing the European Union.

The legitimacy of power, including the power of international organizations, is one of the most important elements of the study of power as such. Legitimation of political institutions is an issue that has long been studied by representatives of political science, sociology and psychology (Weber, 1922/1978; Arendt, 1956; Lipset, 1960; Easton, 1975; Habermas, 1976; Merquior, 1980; Tyler, 1990; Beetham, 1991). The fundamental importance of legitimacy has been also confirmed by many contemporary researchers (Heiskanen, 2001; Rothstein, 2005; Buchanan & Keohane, 2006; Norris, 2011; Tallberg, Bäckstrand & Scholte, 2018). This issue also concerns the European Union (Abromeit, 1998; Beetham & Lord, 1998; Banchoff & Smith, 1999; Wojtaszczyk, 2006; Arnull, 2007; Kubin, 2014), and one of the specific problems is the ‘democratic deficit’ and the ‘legitimacy deficit’ of the EU (Bellamy & Castiglione, 2000; Wojtaszczyk, 2012; Kubin, 2016). Since there is a ‘deficit’, a potential reaction to the situation may be an attempt to reduce it. It is worth reminding that this does not work the other way around, because there is no such thing as an excess of legitimacy.

Cost of non-Europe type analyzes are specific pieces of information based on the assumption that the lack of joint action at the European Union level may mean that a given sector is losing the efficiency of the entire economy and that collective public good, which could otherwise come into being, is not being realized. The cost of non-Europe concept was created in the 1980s and is related to the concept of European added value, which is an attempt to define the economic benefits of taking political actions at the European level in a certain field. The European Commission describes the European added value as ‘the value resulting from an EU intervention which is additional to the value that would have been otherwise created by Member State action alone.’ (European Commission, 2011, p. 1). In turn, cost of non-Europe is an attempt to determine the collective economic costs of not taking action at the European level. Opportunity costs are information that may be and actually is used in a variety of ways. Therefore, the adopted research method is the analysis of cost of non-Europe reports and of the methods of their use in the public discourse.

4.1. The term ‘cost of non-Europe’

The concept of the ‘cost of non-action at European level’ is derived from a study by Michel Albert and James Ball, prepared in 1983 at the request of the European Parliament (specifically for the Special Committee on European Economic Recovery). The authors argued that ‘[t]he absence of a genuine common market for public orders and for research and development and all the other obstacles to trade are equivalent to a fiscal surcharge which would certainly represent approximately one weeks work per year on average for every family in Europe’ (Albert & Ball, 1983, p. 19). They estimated that the communitarisation of public procurement alone would bring savings of 40,000 million ECU per year. In turn: ‘[t]he total cost of passing intra-Community frontiers can be estimated at around 12,000 m ECU a year. This makes a total of around 50,000 million ECU, i.e. 2% of GNP’ (Albert & Ball, 1983, p. 75). This type of data helped to make political decisions. In 1985, the European Commission presented the so-called White Paper on completing the internal market (Commission, 1985), and on July 1, 1987, the Single European Act (1987) entered into force, the main assumption of which was the creation of the internal market at the end of 1992.

The concept of cost of non-Europe was clarified in the study on the costs of not having Europe in the single market conducted for the European Commission by an economist Paolo Cecchini⁹ (Cecchini, Catina & Jacquemin, 1988). The first complete assessment of the costs of the absence of the EU was published in 1988 in 16 official reports¹⁰ of the European Commission as part of the series 'Research on the »Cost of non-Europe« basic findings'. In those, the likely benefits of implementing the Single Market Program by the end of 1992 were estimated. The reports were an *ex ante* action to identify the benefits of removing various types of barriers other than NTBs which were then seen as a major obstacle to the full achievement of the original objectives of the Treaty of Rome (Mayer, Vicard & Zignago, 2018, p. 4). Researchers and analysts tried to predict, for example, by how much (thanks to the introduction of the single market) the GDP of its participants would grow (Cecchini, Catinat & Jacquemin, 1988; Emerson et al., 1988).

This way of defining the goals of cost of non-Europe research allow to consider it a form of information economics. One of the precursors of the economics of information, Joseph Stiglitz, argued that the issues of information are crucial for understanding economic and social phenomena (2000, p. 1441). The social and political dimension of information is particularly important for the European Union, as information has the characteristics of a public good. In relation to the EU, the concept of European public good is also used, understood as the provision of services that affect the well-being of every EU citizen, as opposed to local goods that are delivered at the level of a given local community. Cost of non-Europe information refers to the entire Union, and therefore to all its citizens. In turn, the broadest research field of economics is the study of peoples' decisions in a situation of limited resources that have alternative applications. Therefore, in order to make a decision a person needs information about possible alternatives. Information economics derives from the research into the asymmetry of information and can provide information about alternative possibilities. The calculation of opportunity costs (in this case – of lack of action at the European level) by public institutions is an attempt to realize the European public good and to eliminate information asymmetry.

¹ From 1977 he was an official of the European Commission, deputy director general in the directorate-general for internal market and industrial affairs.

² They totaled over 6,000 pages.

Research on the ‘cost of no Europe’ has been commissioned by the EU institutions to this day, and their number and scope are increasing. The cost of non-Europe concept is currently interpreted as follows: ‘(...) the absence of common action at European level may mean that, in a defined policy area, there is an efficiency loss to the overall economy and/or that a collective public good that might otherwise exist is not being realised.’ (Dywidenda, 2019, p. 7). In this type of research gravity models are used to quantify the effects of the European integration and calculate counterfactual scenarios that represent the costs of a possible absence of the EU (Mayer, Vicard & Zignago, 2018; Felbermayr, Groschl & Heiland, 2018). Some of the research estimate the benefits of further ‘deepening’ the single market at a similar level as the pioneer research by Albert and Ball: ‘It is estimated that a further deepening of this »classic« single market could still yield very significant additional gains for EU consumers and citizens, raising EU28 GDP by a further 2.2 per cent annually over a ten year period, if remaining barriers could be eliminated.’ (Zarys, 2014, p. 14). By 2014 the European Parliamentary Research Service had published 75 different publications on this subject.

The European Parliament’s analytical services have prepared 21 cost of non-Europe type of reports only during the 8th term of office (2014–2019) (*Impact*, 2019, p. 6). The most important was the periodically updated *Mapping the cost of non-Europe* in which the range of analyzed sectors is gradually broadened, for example since January 2018 the research scope has been widened to 50 areas of politics, including completely new fields such as data protection and cybersecurity. From January to September 2019 three more reports, in areas going beyond the classically understood common market, were published: studies ‘Cost of non-Europe in robotics and artificial intelligence’ and ‘The cost of non-Europe in the area of legal migration’, as well as a briefing ‘Area of freedom, security and justice: Cost of non-Europe’.

The European Commission has also defined the context in which it perceives the ‘European added value’:

[it] fits with the principle of subsidiarity and proportionality. The EU should not take action unless it is more effective than action taken at national, regional or local level. EU action has to be additional or complementary to national or regional efforts, but should not fill in gaps left by shortcomings of national policies (Komisja Europejska, 2017).

If this interpretation is carried out in practice, some of the Member States which have so far been the largest beneficiaries of the EU budget may lose the benefits of the previously used EU budget paradigms – the key importance of cohesion policy and the common agricultural policy.

The issue of opportunity costs is so important that it was included in the agreement between the three EU institutions that have been participating in the legislative process and aiming at improving the quality of legislation. The European Parliament, the Council of the European Union and the European Commission agreed that

the analysis of the potential ‘European added value’ of any proposed Union action, as well as an assessment of the »cost of non-Europe« in the absence of action at Union level, should be fully taken into account when setting the legislative agenda (*Porozumienie*, 2016).

Opportunity costs analyzes are commissioned as part of the assessment of the effects of planned legal regulations:

Impact assessments should also address, whenever possible, the »cost of non-Europe« and the impact on competitiveness and the administrative burdens of the different options, having particular regard to SMEs (in accordance with the ‘Think Small First’ principle), digital aspects and territorial impact (*Porozumienie*, 2016, clause 12).

There is rich literature on the advantages of the European common market but at the same time there is not much research on the economic benefits for EU Member States as such – the benefits that would come directly from EU membership. It should be remembered that, for political reasons, it is not the opportunity cost for the EU as a whole (and this is presented in the reports commissioned by the EU institutions) that is the important perspective for individual countries, but the possible opportunity cost for a given Member State. Even individuals / voters with a strong European identity express their political preferences, first and foremost, at a national rather than European level. Moreover, the authors of such studies often recommend cautiousness in evaluating their estimates and conclusions (Henrekson, Torstensson & Torstensson, 1997, p. 1551; Badinger, 2005, p. 50; Crespo, Silgoner & Ritzberger-Grünwald, 2008). However, studies based on the synthetic counterfactuals method confirmed that 19 Member States of

the EU that joined the European Union as part of its successive enlargements between the years 1973 and 2004 benefited from it, and the benefits were usually permanent in nature and increasing over time (Campos, Coricelli & Moretti, 2014). Only one country would have a higher GNP and higher productivity in the counterfactual scenario, i.e. outside the European Union – Greece (pp. 25–26). The Bertelsmann Foundation’s estimate (based on calculating the cumulative gains in the real GDP per capita growth between 1992–2012) was similar. According to it every Member State, except Greece, achieved significant income increases thanks to the European integration (*20 years*, 2014).

4.2. The role of ‘cost of non-Europe’ in legitimizing the European Union

EU commissioners of research on the concept of ‘cost of the lack of Europe’ assumed from the beginning that it would have communication functions. This was due to the paradigm that the single market would be more beneficial to its participants than its absence. EU institutions confirm in various documents the communicative function of research on the costs of non-Europe. As it was emphasized, for example, in the methodological note of the European Parliament’s Directorate-General for Internal Policies of February 21, 2011:

In principle, the justification for estimating these costs/benefits reflects the determination to make decisions based on »scientific evidence« concerning various concepts or principles (of good financial management, effectiveness or sustainability) in order to guarantee the policy’s transparency and accountability vis-à-vis the general public (as cited in Opinia, 2012, p. 3).

While scientifically sound economic analyzes may support accountability in decision making, their impact on the transparency of this process is very limited. The communication function was largely based on the fact that reports on opportunity costs were to convince of the validity of the European integration as the optimal option in terms of economic benefits.

One of the European Economic and Social Committee opinions on the Cecchini report of 1988 stated:

these estimates were based on a methodology and basic hypotheses that are open to some criticism and challenges. Furthermore despite their success in communication terms, as far as we know these forecasts have never been reviewed in any way and thus their accuracy has never been evaluated *ex post* (*Opinia*, 2012, p. 3).

That is indeed the case – the forecasts had not been checked scrupulously enough. At the same time, the experts of the European Parliament admit that

[t]he Cecchini analysis helped drive forward efforts to complete the single market, which have continued since then, but the central idea behind it seems gradually to have disappeared from debate, as the positive effects of a deeper and wider market have come to be taken for granted (*Zarys*, 2014, p. 7).

At a single Member State level this ‘obviousness’ has not been confirmed by only one country – Greece. On the other hand, in some countries that are net beneficiaries of the EU budget, such as Poland, the public debate is definitely focused on the balance of direct financial transfers, and not on the benefits of the single market for the EU as a whole.

In 2014, officials expressed their satisfaction with the results of the work undertaken on European added value and at the cost of an absence of Europe, as they ‘proved valuable in the run-up to the European elections and assisted committees during the hearings for Commissioners-designate’ and ‘attracted positive attention in media, academic and policy-making circles.’ (*Information*, 2014, p. 5) The forecasts presented in the latest reports, not accidentally published just before the 2019 elections to the European Parliament, may be impressive. Recent analysis indicates that potential benefits to the European economy (UE-28) could amount to EUR 2 213 billion in 2019–2029 if the EU institutions adopted and implemented appropriate policies (*Dywidenda*, 2019, p. 5). That is European added value, resulting from additionally generated GDP or from a more rational use of existing public resources (thanks to better coordination of public expenditure at national and European level). Ten basic areas that make up this huge sum are (*Dywidenda*, 2019, pp. 5–6):

- classic single market (EUR 713 billion),
- digital economy (EUR 178 billion),
- Economic and Monetary Union (EMU) (EUR 322 billion),

- environment, energy and research (EUR 502 billion),
- transport and tourism (EUR 51 billion),
- social Europe, employment and health (EUR 142 billion),
- citizens' Europe (EUR 58 billion),
- Justice and Home Affairs – migration and borders (EUR 55 billion),
- Justice and Home Affairs – Security and fundamental rights (EUR 125 billion),
- EU external policy (EUR 67 billion).

Each of the basic areas consists of several detailed sections, e.g. 'classic single market' includes (*Dywidenda*, 2019, p. 9):

- completing the single market for goods,
- completing the single market for services,
- guaranteeing consumer rights,
- promoting the collaborative or sharing economy,
- addressing corporate tax avoidance,
- combatting value added tax fraud.

Thanks to reports on opportunity costs, politicians can prove that the EU pays off for everyone. For example Donald Tusk, who at the time was still the Prime Minister, during his visit to Moldova persuaded the hosts that the Union is profitable for every citizen (*Tusk: Unia* 2014). The Committee of the Regions represents a similar approach, seeing European added value as 'the opportunities it offers Europeans to fully develop their potential as individuals across borders' (as cited in Bertelsmann Stiftung, 2013, p. 16). Research contracting institutions do not conceal the link between the analyzes and current political needs. The choice of research areas in the reports of the European Parliament's Research Service is, for example, 'closely related to specific work of, or requests, or policy positions expressed, by parliamentary committees.' (*Dywidenda*, 2019, p. 11)

The research on the cost of non-Europe concept showed that there are more analyzes *ex ante* than *ex post*. Researchers are trying to explain why this is so:

Generally it is easier to conduct *ex ante* studies on economic integration than to analyse the outcome *ex post*. This is also documented by the much larger number of *ex ante* studies. Some of the rare *ex post* studies, in particular those on the SM, are somewhat disillusioning. The expected pro – competitive effects and the implied growth bonus from the SM appear to have not been fully realised so far (Badinger & Breuss, 2011, p. 308).

The difficulty is also that the historical alternative scenarios (what would have happened if the transfers within the European Union had not taken place?) are quite difficult to construct (Boldrin & Canova, 2001, p. 7; Boltho & Eichengreen, 2008, p. 13). That explains why the authors themselves encourage caution in interpreting their estimates.

The issue of legitimacy is very important to the European Union, as it is not a typical international organization. The EU is a specific structure, *sui generis*, having no counterpart either at present or in the past. It has characteristics of both a typical international organization of an intergovernmental nature (although its competences are much wider than those of a standard intergovernmental organization), a supranational organization and a state, but at the same time it is none of these entities. The reason for the EU’s ‘legitimacy deficit’ is that it was built without the active participation of European voters (Franklin & van der Eijk, 1996, p. 3), and democracy is a very important source of Member States’ legitimacy. Therefore, the European Union – whose institutions are aware of the weakness of their own legitimacy – is trying both to strengthen citizens’ participation and to point to other potential sources of its legitimacy.

Conclusions

Cost of non-Europe analyzes are used to convince public opinion that the economic benefits of EU membership are scientifically proven. They refer to the rationality of citizens, reinforcing the belief that European integration is a mechanism beneficial for all participants. The aim of creating the single market was precisely to achieve Pareto efficiency¹¹ (allocative efficiency¹²) thanks to which every state, every sector and every consumer/citizen feels the benefits of the economy of scale and of the efficiency resulting from liberalization (Smith & Wanke, 1993). Opportunity cost analyzes, due to their complexity and volume, are not intended for everyone; they are addressed to specific groups of recipients, multipliers of opinions – politicians, journalists and researchers, with the intention that multipliers will pass their opinions on, thus influencing European public opinion. A separate problem is what is the nature

³ Vilfredo Pareto (1848–1923) – Italian sociologist and economist. The author of so-called Pareto optimality – the optimal state in which no action could improve satisfaction of one entity without making the situation worse for some other.

⁴ In economic theories it is assumed that allocative efficiency can only be achieved under perfect competition.

of European public opinion and what is its relation to public opinion in individual Member States.

Related to the analysis of alternative costs, the concept of European added value already in its name contains a positive message, which – in short – is to lead to the conclusion that integration ‘pays off’. The ‘payoff’, in turn, is part of a utilitarian legitimacy in which the source of legitimation is efficiency, effectiveness, contributing to the common good and generating economic benefits. Seymour Martin Lipset emphasized that legitimation has its sources, *inter alia*, in instrumental efficiency (1995). The fact that utilitarian legitimation would replace political legitimation raises the question of the power of utilitarian legitimation and the effectiveness of such a replacement. ‘Instead of political legitimation procedures, the basis for authorizing integration processes were utilitarian issues, related to measurable benefits and improvement of the quality of life of most citizens. Thus, utilitarian legitimation was based on economic development and improvement of living conditions.’ (Grosse, 2012). Utilitarian legitimacy does not, however, reduce the deficit of political legitimation. Mere ‘payoff’ is not enough to justify the transfer of power from the national level to the international organization level.

The scientific nature of the arguments used is also important for legitimation. Knowledge and competence enable the most effective governance in given conditions, and this allows them to be considered sources of technocratic legitimacy. ‘Within this justification, the rulers exercise power because it is in accordance with »scientific, objective laws of social development.«’ (Kubin, 2014, p. 48) Referring to knowledge as a source of legitimacy is not a new idea. Already Henri de Saint-Simon¹³ indicated that knowledge is the next, after religion and philosophy, stage in the evolution of sources of the legitimacy of power (Beetham, 1991, p. 74). In view of the weakness of its own legitimacy, the European Union eagerly uses the most recent, in terms of its evolution, source of legitimation, especially as science is transnational. However, some researchers believe that ‘all decisions transferred to the supranational level require some form of democratic legitimacy’ (Sander, 2018, p. 84).

Cost of non-Europe analyzes fit well in the concept of knowledge-based or (scientific) evidence-based policy. They therefore suit the supporters of meritocracy; especially

⁵ Henri de Saint-Simon (1760–1825) – French philosopher and economist, representative of utopian socialism.

those who see meritocracy as an opposition to governments based on nationality (nationalism). In the case of research on the ‘cost of no Europe’ the source of legitimacy is economic knowledge. Economic models and forecasts based on them can have a significant impact on the future of the European Union not because they are corroborated (or disproved) by the results of *ex post* research, but because they help to legitimize the very existence of this international organization. Not everyone accepts such use of knowledge and science. The most radical opponents of the legitimizing function of science are the supporters of – recently intensifying – anti-scientific trends: anti-vaccinationists, climate change deniers, representatives and users of alternative medicine, or extreme Eurosceptics. Moderate opponents of legitimizing the European Union by means of information economics emphasize in turn the lack of verification of economic forecasts through *ex post* research and the superiority of political legitimation (sovereignty, tradition, ‘will of the nation’, elections) over utilitarian and technocratic legitimation. As a result – in the case of the European Union – one can expect many disputes concerning the legitimizing function of the economics of information.

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V

Brexit and the economics of information¹

(ALEKSANDRA RABCZUN)

Introduction

The 21st century can be undoubtedly considered the era of information. Getting to know the specificity of its acquisition and spreading is crucial for the correct analysis of functioning of modern economies and for decision-making at all levels, from micro-economic to megaeconomic. For these reasons, information and broadly understood communication with the entire group of stakeholders in a society play an important role. Citizens must have access to information and use it skillfully, and for this purpose transparent information and coherent communication are essential (Deszczyński, 2017, p. 51). Paradoxically, although we live in the times of a ‘global village’ and news travel around the world in a few seconds, we are exposed to disinformation and fake news (Rydzak, Verhoeven, 2018, p. 18). On the wave of this trend, as well as victories of parties referring to populist slogans, the world is going through a global crisis of trust. The main aim of this chapter is to analyse the case of Brexit and the role of information economics in connection to that. As the special aspects of information actions, the author assumed the perspective of the referendum campaign and Brexit negotiations between the EU and the UK.

5.1. The genesis of Brexit

The sources of Brexit can be found in two types of conditions. They result, on the one hand, from a deepening crisis of Western democracy, and on the other, from the specificity of British society. In the first case, it is a phenomenon called by political scientists a ‘catch-all party’, which results in finding unquestionable authorities among politicians – pro-nationalists caring for the long-term interests of the state and society¹ – being more and more

¹ On the contrary – activities aimed primarily at pursuing their own career or the particular goals of their party are dominant. When making decisions, they take into account results of current

difficult. The financial crisis of 2007, in turn, significantly contributed to the deterioration of social mood, which is reflected in a change in the approach to values such as democracy. People's dissatisfaction due to the weaker economic situation and poorer macroeconomic indicators has vented frustration and triggered the activation of populist movements. Populism is based on the fear of change of the current *status quo*, and this translates into less social trust. The decline in trust levels contributes to vulnerability to manipulation and fake news. It is especially noticeable when analysing social masses and not individuals. A statistical citizen may be more or less educated, wealthy, economically, politically and socially aware. The lower the quality of human capital, the greater the susceptibility to simple populist slogans. A characteristic of modern democracy is that the majority wins, and if the majority of citizens show medium social and economic interests, then the populist politicians in the country come to power. This, in turn, translates into the crisis of democracy. Brexit can be safely considered a manifestation of a British democracy crisis.

On the other hand, the source of Brexit is the specificity of British membership in the European integration – emphasizing its uniqueness. The United Kingdom's location on the islands contributed to the development of strong British individualism, which was reinforced during the colonial era. Until now, among British people there is a strong sense of identity and a persistent belief in the power of their own empire. Historical heritage, traditions, religion, and the specific law of Great Britain create a special cultural trend, not fully integrated with the rest of Europe (Bobińska, 2016, p. 4).

The UK joined the European Economic Community (EEC) in 1973. However, its membership did not cover all dimensions of the integration. It has never been a member of the euro area and, under the 'opt-out clause', has not joined the third stage of integration within the Economic and Monetary Union (Małuszyńska, Gruchman, 2005, p. 123). Moreover, it was not a part of the Schengen area and has repeatedly argued for limiting EU policies for harmonizing regulations between EU member states (Pawlas, 2017, p. 169).

British society has been multicultural for centuries, but the process has taken a special form (Zuba, 2012, p. 101). Multiculturalism has become the basis for political mobilization and formulation of programs, with particular emphasis on the problem of migrants (Triandafyllidou, 2002, p. 73). There are some politicians in Great Britain who built their political capital on a wave of fear and dislike of the 'stranger'. This resulted in a clear crisis

polls, but pay little attention to a long-term formation of public opinion. See Deszczyński, 2009, p. 101.

of the British model of multiculturalism. This process was undoubtedly influenced by the terrorist attacks in London in 2005. According to the British, they were a symptom of ineffectiveness of the integration programs. After the attacks, there were voices in favor of the need to revise the policy of multiculturalism (Cameron, 2011). The massive influx of immigrants, including those from the newly admitted European Union (EU) countries after 2004, was also an important factor. The local community viewed this as an unfair competition on the labour market and a burden on the welfare system (Kupis 2017, p. 77). It was often heard that people come to take away jobs and receive social benefits. The influx of immigrants is being associated not only with negative social but also cultural consequences. Migrants are perceived as strangers. The elements that determine the sense of alienation are social contact (i.e. integration) and the value system consisting of norms and values. The concept of strangeness and familiarity should therefore be considered from the perspective of a given culture.² Familiar is the one who knows social rules governing a given group, its language code and shares similar values, and a stranger is someone who does not (Kupis, 2017, p. 84).

Newcomers who did not follow a certain value system or did not know the language, willingly settled in places where they could stay with people culturally convergent with them. This led to a kind of ghettoization, visible not only in Great Britain. It gave rise to further negative effects, including marginalization and, as a result, exclusion from social life (Kupis, 2017, p. 86). The term 'social exclusion' is defined mainly by identifying deficits in involvement in important aspects of collective life, such as, for example, participating in the local community. Immigrants are stigmatized for various reasons in the country they came to, which has negative consequences, e.g. a weakened willingness to prove their competences to the hosts (Kupis, 2017, p. 87). The migration issue was at the heart of the Brexit referendum campaign (Armstrong, 2017, p. 73). Phenomena such as nationalism, populism, stigmatization of social groups or anti-European movements find supporters in many European countries, e.g. in Germany, which is reflected in political elections to local parliaments and the European Parliament (Janicka, 2017, p. 134).

Research shows that attitudes towards the membership of a given country in the EU structures and towards the integration are influenced by attachment to one's own culture. Fear of strangers, on the other hand, plays a fundamental role in defining national identity

² It is not only a British problem. For more on the significant role of culture in the context of information economics see Deszczyński, 2018, pp. 36–47.

(McLaren, 2002, pp. 551–566). In the context of Great Britain this can be verified by looking at research into support for the UK Independence Party which promoted leaving the EU. It used fear and negative emotions that, in case of the British, took precedence over the real assessment of migration effects. Moreover, the British public is strongly influenced by the press, especially newspapers. As many as 80% of British people regularly read national newspapers (Fox, 2014, p. 314).

The official position of the British government was different. It was emphasized that emigrants made a significant contribution to the UK economy (Travis, 2016). The government, however, was not able to break this information to the average John Smith, especially living outside London. Neither has a way been found to neutralize the information campaign of the EU's opponents, who often used lies and slander. The British government underestimated the importance of information economics and Prime Minister David Cameron has paid the highest political price for it, and his powerful Conservative Party may be marginalized as a result of Brexit. Before D. Cameron took steps to organize a referendum, he had informed the EU about the need for reforms. In June 2015, at a meeting of the European Council, he highlighted four key issues that should be reformed, including:

- sovereignty,
- fairness/impartiality,
- immigration,
- competitiveness (Armstrong, 2017, p. 26).

In the practical functioning of the UK political system, the institution of a referendum did not play any role until 1975 (Deszczyński, 2008, pp. 34–53). The first one was held on the basis of a special parliamentary act and concerned the decision to join the EEC (Wronecki, 1979, p. 43). The government in an act undertook to recognize the will of citizens expressed by voting. Quite high turnout and a positive result were perceived as confirmation of the rightness of actions taken by the parliament and aimed at European integration (Jabłoński, 2007, p. 67). Then a few other referenda were held, to eventually reach the most important one – the withdrawal of Great Britain from the EU.

In order to do this, it was necessary for the Parliament to pass a referendum law³ setting out the rules for the organization and holding of a referendum in the above-mentioned matter (Węgrzyn, 2017, p. 112).

³ It is the European Union Referendum Act 2015. See http://www.legislation.gov.uk/ukpga/2015/36/pdfs/ukpga_20150036_en.pdf.

5.2. The role of the economics of information in the referendum campaign

The media influence public opinion not only in theory but also in practice. The basis for theoretical considerations may be, for example, the cultivation theory by G. Gebner, which indicates that television has an important influence on shaping people's attitudes and awareness (Leszczyński, 2016, p. 94). In turn, the theory of agenda-setting by M. McCombs and D. Shaw states that the media have a stronger influence on what people think about (Goban-Klas, 2008, p. 29). The referendum campaign was profiled. Brexit supporters received information that was supposed to reassure them of the rightness of their decision. Statistically, a citizen voting to leave the EU was less well-off, less educated and had a worse job than a Brexit opponent. Individual regions also voted differently (Chart 2). The state of the media campaign around Brexit can be related to the economics of information and the famous book by Akerlof (1970). For the purposes of this text, one could be tempted to build a model in which the British are divided into two groups. The group of less informed and less interested in the actual consequences could be attributed to the 'lemons'. Thus, Brexit supporters pushed their opponents out, and the information campaign played a huge role in this. Therefore, it can be applied to one of the laws of economics – the law of Copernicus-Gresham. In the original version, worse money drove out better money, and in the case of Brexit, less informed and more manipulated citizens drove out citizens with a more common sense approach to the European integration.

Nowadays, the most common source of knowledge about the surrounding world is the Internet. Thus, no one is surprised by the interest in the term "Brexit" in search engines. Thanks to the Google Trends data, it was possible to take a look at how often this term has been searched over the years 2016–2020. The results are presented in Chart 1.

As the chart shows, the greatest interest was noted between June 12 and 18, 2016. Then, the popularity of the term (except for minor episodes) was moderately low. With the final date for leaving the EU,⁴ the interest in the term 'Brexit' grew. It is fair to assume that UK citizens were not interested in the topic prior to the vote. However, when the actual feeling of consequences was to come, the awareness grew, and more and more people wanted to check the reports on leaving the EU. The increase in the

⁴ On November 29, 2019, the President of the European Council Donald Tusk, announced that the EU27 formally accepted the Brexit delay until the end of January 2020. This was the third postponement of the deadline, with it being made clear that 'it may be the last one' (Ojczyk, Sobczak, 2019).

interest was noticeable from November to, approximately, April of 2020. The British were convinced that the exit would take place by the end of 2019, so they wanted to check internet reports on how this Brexit was affecting their lives and work. The beginning of 2020 gave them another worry – the coronavirus epidemic broke out in the world. Great Britain initially downplayed the threat, which resulted in a high number of deaths. It was decided to close the economy completely at the end of March. The decline in the interest in Brexit is not surprising given the domestic situation⁵.

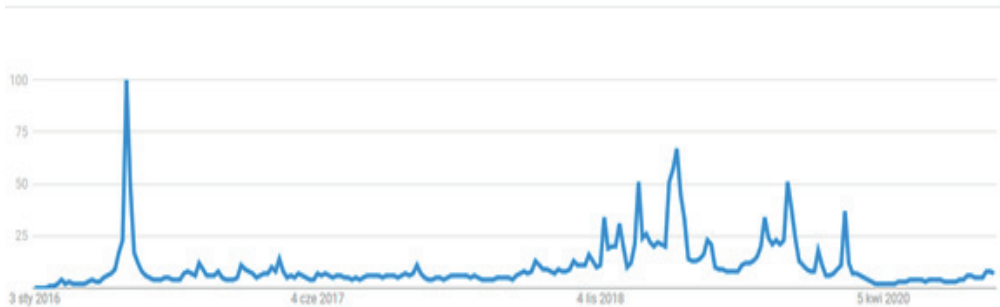


Chart 1. Interest in the word 'Brexit' on Google Search in the UK from January 2016 to the end of October 2020

Source: own study based on the data from Google Trends, <https://trends.google.com/trends/explore?date=2016-01-01%202020-10-21&geo=GB&q=brexit> [accessed: 02.11.2020].

Particular attention should be paid to the question raised in the referendum as it was highly debated in the UK. The initial options 'yes' and 'no' were changed to 'remain' and 'leave' (Armstrong, 2017, pp. 50–52). Information campaigns – one for remaining a member of the EU (the 'Remain' campaign) and the other for leaving (the 'Leave' campaign) – were named after the answers to the Brexit question.

⁵ Interestingly, the increase in popularity of the Brexit search in November 2019 is also related to the increased search for the keyword 'no deal Brexit', which means that the British were well aware of the unsatisfactory effects of Brexit negotiations and the possibility of leaving the EU without an agreement (<https://trends.google.com/trends/explore?q=no%20deal%20brexit&date=2016-01-01%202020-10-31&geo=GB>; accessed: 02.11.2020).

The Brexit referendum campaign, conducted in the UK in the spring of 2016, was largely based on nationalist slogans of aversion to migrants and on an irrational fear of newcomers. As a result, it led to an escalation of aversion and, in extreme cases, aggression towards others⁶ (Kupis, 2017, pp. 74–75).

Brexit supporters in their campaign stressed the issues that were particularly sensitive to the British. The most important are:

- savings in the state budget resulting from the lack of a membership fee,⁷
- conducting own and independent immigration policy, including social security issues,⁸
- applying British law and being under the national jurisdiction.⁹

Analyzing the arguments of the supporters of the exit, it can be noticed that the British wanted to return to independent decision-making, as membership in the Union consists in giving up some control over their own affairs and partially losing sovereignty in favor of a common EU policy.¹⁰

In the context of the Brexit campaign, several important facts should be noted. Firstly, the Prime Minister loosened the general rule on the cabinet collective responsibility, so that any minister could speak freely about Brexit without representing a top-down position. British ministers exercised this right by taking both sides. D. Cameron himself emphasized that he would be in favor of staying in the EU if an attempt to reform the membership was made (Armstrong, 2017, pp. 56–57). The campaign around the referendum was also financed from public funds. The limitation, however, was the possibility of using British budget funds only to promote the date of the referendum, questions or other legal issues. All information aspects or opting for a specific position had to be financed from private sources.

⁶ It is not only about Indians, Pakistanis and other nations, but also Poles, who constitute one of the most numerous groups of immigrants. It should be mentioned that while it is easier to sociologically explain the aversion to nations with a different culture or religion, the aversion to other Europeans, culturally similar to the British, is motivated mainly by political and economic aspects.

⁷ The issue of contributions to the EU budget is important due to the so-called UK correction negotiated by Margaret Thatcher. The contribution is calculated on the basis of the number of inhabitants of a given member state and its GDP, however the UK negotiated a rebate of 2/3 of the difference between what it paid and what it should pay. This rebate was widely commented on by other countries, as none of them managed to negotiate such a large discount.

⁸ See <http://www.theweek.co.uk/brexit-0>.

⁹ See <http://www.telegraph.co.uk/news/2016/06/22/20-reasons-you-should-vote-to-leave-the-europeanunion/>.

¹⁰ <http://www.theweek.co.uk/brexit-0>.

The Britain Stronger in Europe group was campaigning for remaining in the EU, whereas Vote Leave, GO Movement and Trade Union and Socialist Coalition were against (Armstrong, 2017, p. 61). All these organizations were supported by individual political parties and politicians.¹¹ On February 24, 2017, financial data was released that showed that the anti-Brexit side spent GBP 16 million¹² on the campaign, while the side supporting Brexit spent only GBP 11.5 million¹³ (Electoral Commission, 2017). Overall, the ‘Remain’ campaign was based on the facts and benefits of membership, while opponents appealed to nationalist slogans and returning to the British their own democracy, law, trade, money, people and borders (Armstrong, 2017, p. 66). It is significant that major British press titles, such as *The Times*, *The Guardian* or the *Financial Times*, were more in favor of the campaign to remain and the tabloids *The Sun*, *The Daily Mail*, *Daily Telegraph* and *Daily Express* strongly supported the proponents of Brexit. The analysis of the age, education and residence structure of the readers of individual titles coincides with the profile of the supported option in terms of Brexit, which means that a certain type of message hit the ground it was intended to hit. When building their idea of a subject, people rely on assumptions and generalization. When meeting a given person or situation, they do not try to look objectively, but look only for confirmation of what they have imagined so far. Therefore, the influence of the British press was crucial for the voters’ confidence in their convictions. Ultimately, the referendum was held on June 23, 2016. According to official results, 51.9% of the British voted in favor of leaving the EU, while against – 48.1%.¹⁴ The turnout was 71.8%.¹⁵ The detailed results are presented in Chart 2.

¹¹ Including the current Prime Minister Boris Johnson who from the very beginning had been opting for leaving the EU – and in the ‘hard Brexit’ version.

¹² However, as of 30/07/2019, it was over 19 million pounds.

¹³ As of 30/07/2019 it was over 13 million pounds.

¹⁴ According to <http://www.bbc.com/news/uk-politics-32810887>.

¹⁵ Ibidem.

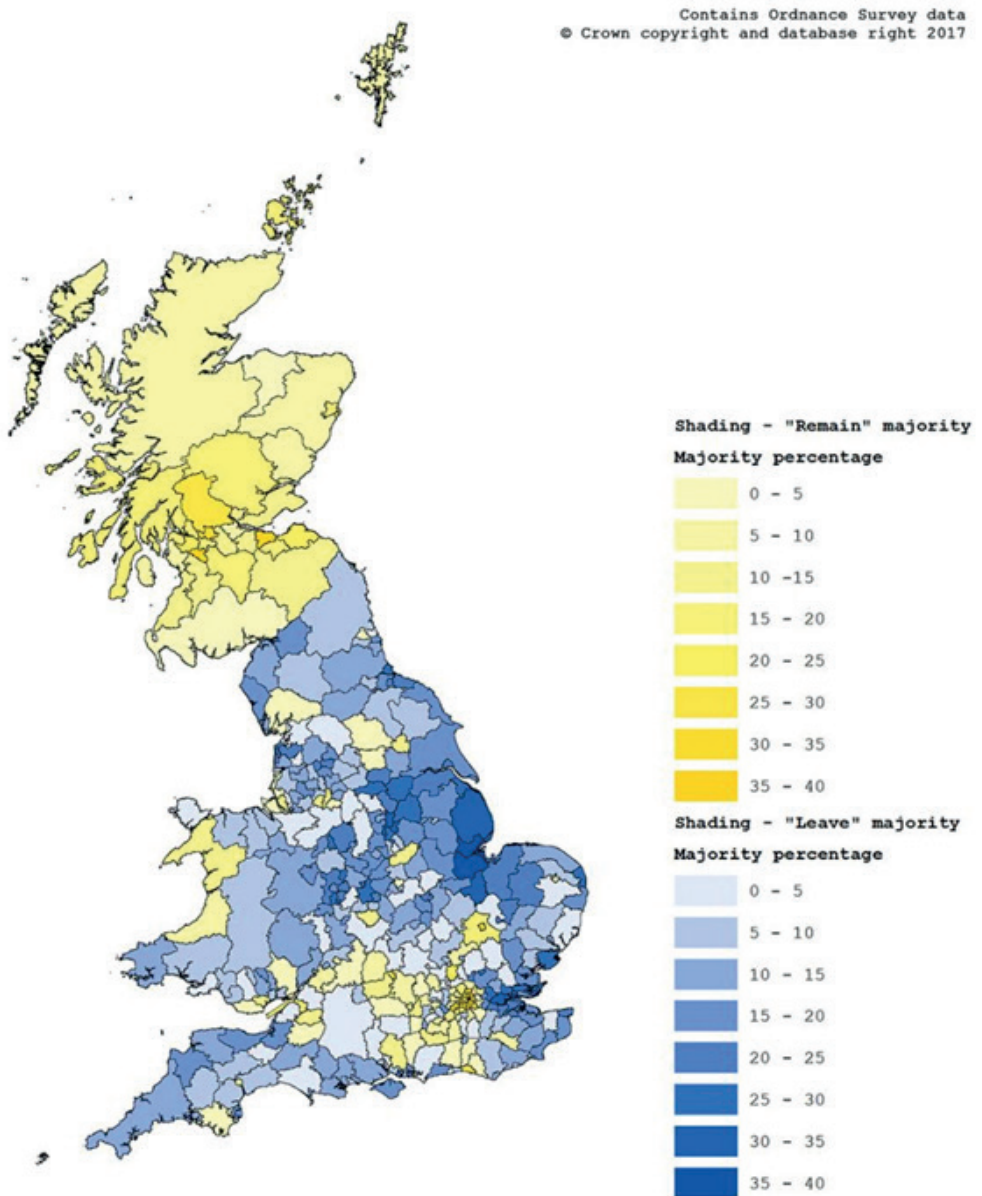


Chart 2. Results of the referendum on Great Britain leaving the EU

Source: Mapping the Brexit vote, University of Oxford, <http://www.ox.ac.uk/news-and-events/oxford-and-brexit/brexit-analysis/mapping-brexit-vote#> [accessed: 30.07.2019].

It is worth emphasizing that creating the possibility of leaving the EU at the European level and in the United Kingdom on the basis of relevant legal acts¹⁶ was just a formality. Thaler himself stated that the ‘architecture of choice’ created by both sides did not create the legal and political framework of the post-referendum reality (Thaler, 2016).

Under British law, the result of the referendum does not deprive the parliament of its autonomy in making decisions, but nevertheless in the political sense it should be respected, as it is an expression of the will of the people (Zięba, 2013, p. 236). Accordingly, steps have been taken to effectively leave the Community. This process was called Brexit after the combination of the words ‘British’ and ‘exit’.¹⁷ It was a kind of precedent, as it was the first country that decided to leave the EU, and the exit procedure itself was not regulated by EU law. Rudimentary information on this subject can be found in the Treaty of Lisbon¹⁸, as well as in the Treaty on European Union¹⁹, but there are no specific regulations, e.g. concerning the cut-off dates for the start and end of the process.

5.3. The role of the economics of information in Brexit negotiations

The next stage is negotiations with the United Kingdom conducted by the Union on the basis of the guidelines of the European Council, under which an agreement should be concluded between the parties specifying the terms of withdrawal, as well as the framework for future mutual relations.²⁰ Both parties had two years to conclude such an agreement. The United Kingdom formally notified the European Council of its intention to withdraw from the EU by the letter of notification delivered on March 29, 2017. The European Council accepted it, expressing its regret over the British decision (Granowska, 2018, p. 7). This procedure launched Article 50 of the Treaty on European Union.

It provided for two years of negotiations with the European Union to settle the future relationship, which could be extended with the unanimous consent of the Heads of State and Government, as was indeed the case with the UK. Admittedly, in early February 2017 the British government issued a white paper entitled *The United Kingdom’s exit from*

¹⁶ Cited in this work.

¹⁷ Peter Wilding, who first used it on his blog on May 15, 2012, is considered to be the author of the term.

¹⁸ See <http://en.euabc.com/upload/books/lisbon-treaty-3edition.pdf>.

¹⁹ In particular in paragraph 1–5 Art. 50.

²⁰ Pursuant to Article 50 (2) of the Treaty on European Union.

and new partnership with the European Union,²¹ which defined the government's plans in the form of 12 priorities guiding the negotiations, but as practice shows, these negotiations turned out to be more complicated. The main objective of the first stage was defined as ensuring an orderly withdrawal of the United Kingdom from the Union so as to reduce uncertainty and minimize disruptions caused by the change as much as possible (Granowska, 2018, p. 27). On June 19, 2017, Michel Barnier (EU Chief Negotiator) and David Davis²² (Secretary of State for Exiting the European Union) launched the first round of Brexit negotiations, which continued in the following months without results. After the fifth round of negotiations in October 2017, Barnier openly stated that despite the constructive atmosphere in the talks, no progress had been made. According to reports from both sides, the most difficult point of reaching a compromise was financial settlements. The UK proposed to cover the exit costs up to EUR 20 billion, while the EU demanded EUR 60 billion. The discrepancy is due to the scope of cost recognition. The United Kingdom only counted direct costs, and the EU added to the settlement, for example, the cost of British contributions to the EU budget, as well as costs related to the free movement of people²³ (Granowska, 2018, p. 28). In the face of endless negotiations, on November 21, 2017 Davis stated that London is also considering a scenario where there is no deal, and London and Brussels break all ties completely and suddenly.²⁴

Among the significant dates in the context of Brexit, the days from 6 to 9 February 2018 should be mentioned. The Community and the United Kingdom focused on aspects such as the transition period, Ireland and the Northern Ireland border, as well as the management of the Brexit withdrawal agreement. The third stage of the talks was inaugurated on March 7, 2018 by chairman D. Tusk. He presented draft guidelines on the framework of the relations between the parties. Moreover, he stated that the only possible option under these conditions was a free trade agreement. He also suggested that

²¹ Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/589191/The_United_Kingdoms_exit_from_and_partnership_with_the_EU_Web.pdf.

²² In July 2018, David Davis resigned from his portfolio of minister and was replaced in Brexit negotiations by another politician (Dominic Raab). From January 31, 2020, David Frost is the negotiator of the British side.

²³ These include, among others, a special pension fund for EU employees or transfer of two UK agencies to another Member State.

²⁴ This scenario is called 'dirty Brexit'.

both sides should continue, inter alia, joint fight against terrorism.²⁵ The analysis of the approach of both sides shows that the EU side is much more open and willing to make concessions. At the end of October 2019, more or less the same was known as a year ago. Both sides negotiated, however, the British realized more and more that they would have to leave without an agreement. On November 7, Prime Minister B. Johnson, talking to the chairman of the European Commission, U. von der Leyen, was to start again talks on mutual relations after the end of the transition period. However, media reports indicate that London was ready for a no-deal.²⁶

There are legal, economic and political consequences related to the British leaving the EU (Węgrzyn, 2017, p. 118). It is difficult to clearly predict these effects, especially since the statements of experts are based on various arguments, and none of the parties involved in the process has an idea how to get out of this stalemate.

Brexit is associated with the cessation of the application of EU law. As proved by selected politicians, as much as 60% of the law in the UK is EU law, which was unacceptable given the individualistic approach of the British (Armstrong, 2017, p. 113). The discontinuation of the application of EU law raises problems, especially in the field of intellectual property protection rights (Węgrzyn, 2017, p. 118). Until now, the protection of the EU trademark and the Community patent design has been respected. In the future, British entrepreneurs, as well as other operating in Great Britain, will have to face additional costs to protect their property (Karet, 2016, p. 75).

The legal consequences are associated with an increase in costs not only for entrepreneurs. Brexit raises economic uncertainty not only in the UK or in Europe, but also around the world (Fichtner, Steffen, Hachula, Schlaak, 2016, p. 301). This can be noticed by observing abrupt changes in the value of currencies (USD, EUR, GBP) on the dates of important negotiations between the EU and Great Britain. The relationship between a given country's reputation and investors' trust is multidimensional. In the international context, it can be applied to the psychological theory of exchange rates by A. Aftalion (Leszczyński, 2016, p. 98). He proved that changes in exchange rates reflect changes in confidence in a given country and its currency, and this is influenced by, inter alia,

²⁵ See <http://www.consilium.europa.eu/pl/press/press-releases/2018/03/07/statement-by-president-donald-tusk-on-the-draft-guidelines-on-the-framework-for-the-future-relationship-with-the-uk/>.

²⁶ See <https://forsal.pl/swiat/brexit/artykuly/8000163,johnson-chcemy-umowy-z-ue-ale-jest-esmy-przygotowani-na-jej-brak.html>.

psychological factors (Ociepka, 2002, p. 218). In addition, changes in exchange rates are influenced by factors such as statements of famous politicians of a given country, businessmen or analysts (Rubaszek, Serwa, 2009, p. 8).

Another parameter showing the scale of uncertainty is the increase in the market price of gold by more than 4% on the day after the referendum (Węgrzyn, 2017, p. 119). It is worth noting that not only the countries involved in the process are skeptical about the Brexit aspects but also international institutions. Two of the three largest credit rating agencies lowered their ratings for the United Kingdom after the referendum, confirming that it is less reliable as a single country than as part of the EU.

Other economic measures that have lowered their values include the performance of British stocks and bonds, as well as trade. A derivative of legal and economic changes is also a change in taxation. After leaving the Union, the British will not be bound, *inter alia*, by VAT directive, and thus – the government will have more freedom in setting tax rates on the sale of goods and services (Renison, 2016, p. 61). The economic slowdown was already visible in the second half of 2016 and 2017. It covered the entire country, but mainly affected the City of London, where many companies from the financial sector, whose operation was based on the so-called uniform European passport,²⁷ have their headquarters (Ronek, 2017, p. 107). The financial sector is particularly important in Great Britain due to employment figure in it and the state budget revenues which constitute as much as 12% of all tax revenues (Bielecki, 2017, p. 5).

In the face of the coronavirus pandemic, another negative aspect of Brexit can be seen. The UK has not dealt best with the pandemic since the beginning of 2020. This is demonstrated not only by the number of deaths and infections but also by the condition of hospitals and the NHS. In the fight against the previously unknown disease – Covid-19 – emergency measures such as disinfection, social distance, and masks are used, while the whole world is waiting for the creation of a drug and a vaccine. Although the common EU policy does not include coordination in the field of public health, all Member States have expressed their willingness and consent for the European Commission to negotiate the details of the million-dollar doses of the vaccine with pharmaceutical companies. Thanks to that, all countries of the community will have access to

²⁷ In line with Directive 2014/65/UE of the European Parliament and of the Council from May 15, 2014, companies operating on the British market, regardless of where they came from, could conduct investment activities as well as provide investment and additional services.

the vaccine, and thanks to ordering large doses, its price will be more competitive than in case of individual countries. Of course, Great Britain will also be able to sign similar agreements, but its bargaining power will not be as large as that of the entire EU.

Alongside many negative aspects of Brexit, a positive note should be noticed. For all ‘strangers’ on the Islands it has become the so-called negative binder, i.e. an experience in the face of which they felt the need to unite (Kupis, 2017, p. 89). It didn’t matter whether one was European or Asian. All non-native British were viewed as ‘they’ as opposed to ‘we’. For the supporters of Brexit, all the issues distancing Great Britain from the European Union were used negatively and turned into a conflict and unhealthy competition of nations (Porter, 2016).

In the debate there was a distinction between two basic scenarios of leaving the Community. The radical loosening of Great Britain’s relations with the EU and closing the borders to immigrants from the EU, as well as rejection of the jurisdiction of the EU courts have come to be called ‘hard Brexit’. In turn, keeping most of the privileges resulting from EU membership without bearing the costs is called ‘soft Brexit’ (Pawlas, 2017, p. 178).

There are, however, several models of cooperation between non-EU countries and the European Union, including:

- Norwegian model,
- Swiss model,
- Turkish model,
- Canadian model,
- creation of a free trade zone in the Great Britain-the European Union relations,
- connection based solely on the WTO membership,²⁸
- creation of a new solution, different from the one used so far by the EU in its relations with third countries (Borońska-Hryniewiecka, Płóciennik, 2016, pp. 17–20).

Economists from The Center for Economic Performance of the London School of Economics calculated that in the best Norwegian scenario, British GDP will decrease by

²⁸ This form of cooperation seems the most likely as of the end of October 2020, but it is not beneficial, as it allows for the use of customs duties, quantitative restrictions and other trade policy instruments.

1.3–3.6% annually. In practice, this means that each British household would have £ 850–1700 less per year (Dhingra, Ottaviano, Sampson, Van Reenen, 2016, p. 5). In the case of the Canadian option, the loss by 2030 could be from 6.3% to 9.5% (Dhingra, Ottaviano, Sampson, Van Reenen, 2016, p. 3). According to OECD forecasts, by 2020 the UK's GDP will be 3% lower per year, however, in the perspective of 2030, three scenarios have been distinguished depending on the negotiated agreements with other large economies. In the best scenario, the loss is to amount to 2.3%, in the medium one – 5.1%, and in the worst scenario – 7.7%, which is still better than internal British statistics (Kierzenkowski, Pain, Rusticelli, Zwart, 2016, pp. 6–8).

In the literature it is emphasized that the first four proposals are unacceptable from the British perspective. In her statements, Prime Minister T. May encouraged to develop a completely new quality agreement with the EU, and not to use the existing models (Pawlas, 2017, p. 178). British MPs had rejected her proposals on several occasions, leading to May's resignation in July 2019 and taking the office of prime minister by B. Johnson, the face of the 2016 Brexit campaign. The new prime minister, although he has been in office for a long time, was unable to overcome the impasse in relations between Great Britain and the EU. The endless negotiations and the impossibility of further extensions of the transition period inevitably bring the British closer to accepting the fact of leaving the EU. The latest reports from the UK show that British society is prepared for possible perturbations. People buy products from stores en masse, creating inventories not only for the lockdown caused by the pandemic, but also for possible problems in the supply of articles from January 2021.

Conclusions

Seemingly, Britain's exit from the EU will increase its independence and national sovereignty. In reality, however, it will limit the British and give them less room to negotiate with the rest of Europe. Leaving the Community means resigning from many privileges, such as the guarantee that the state will not be discriminated against in the internal market due to the use of a currency other than the euro (Balcerek-Kosiarz, 2016, p. 3).

Striving for a 'hard Brexit', Britain will become much less attractive economically, politically and socially. However, it can paradoxically function quite well, as the British have always placed themselves in a marginal position in the context of the European in-

tegration. Knowing, however, British pragmatism, one should expect that sooner or later they will realize that the times of the empire are gone forever. Returning to isolationism is not possible in the modern world full of global and economic ties and the coronavirus pandemic has clearly exposed the weakness of many developed economies and shown that without their own production capacity in terms of food security and medical devices, they are at the mercy of their position in the international supply chain.

Brexit is an interesting issue because it was the result of a powerful information campaign. What got to win was not figures, data and facts, but the rhetoric built by Brexit supporters around migration, the common market and law. Brexit shows perfectly how powerful information and its efficient circulation are these days. Information asymmetry and its consequences strongly affect not only lives of individuals but also functioning of the international community. The global crisis of trust, which has a direct impact on the democratic and social crisis, shows that the demanding attitudes of citizens influence their choice of political parties. In an increasing number of countries, governments consist of populists who only care about current power, and not future prospects. This leads to many manipulations of public opinion and an even greater drop in confidence in governments. The idea of democracy in recent years has ceased to be attractive to the masses, which was influenced by their frustration and dissatisfaction with their own lives. In order to prevent this trend, various actions should be taken to make citizens aware of the role of the media and to fight manipulation. It would be a pity for any other country to experience in the future similar consequences to those that affected Great Britain and resulted from its 'exit'.

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VI

The Economics of Information in German Public Space

(IZABELA JANICKA)

Introduction

In the conditions of modern information technologies the economics of information can explain complex problems of the post-industrial economy in which information plays a supreme role. Over the course of two centuries ‘it has become one of the fundamental factors of production, along with labor, capital and natural resources’ (Oleński, 2001, p. 16). The demand for it is a consequence of the emergence of more and more complex organizational structures of the society, information technologies and broadly understood civilizational progress. In order to function efficiently in the state, society and economy, a minimal information resource is required, known as the functional information minimum. Since the minimum keeps growing, it exceeds human perceptive capabilities and creates an information gap which can be eliminated, *inter alia*, by a constant, widespread education conducted by public institutions for a state, an economy and a society (Oleński, 2005).

The aim of this chapter is to show the impact of the information generated by different decision-making centers in the Federal Republic of Germany on the economic effects in terms of micro and macro scale. Informing the broadly understood society, an easy access to a lot of data and public debates are the basic instruments of communication within the transparent rules of the legal state in Germany. They, however, are also being subjected to deformation for the use of the decision maker. The study will cover the political, media, economic and social spheres in the sender – environment message, as well as indirect forms of manipulation, close to propaganda, used to implement the planned economic ‘profit’.

The subject of this research is the broadly understood public space of the Federal Republic of Germany, identified not only as a factual activity of state organs, but also as other social forces generated in this sphere. Moving away from hierarchical structures of ruling in favor of freeing bottom-up civil forces allowed for a smooth transition from

a private domain to a public one with an independent and critical public interested in the affairs of the state. The public sphere guarantees maintaining the democratic order and pluralism and corrects the system in compliance with laws in force. Along with the evolution of German liberalism after World War II, a wide field of discourse, clash of opinion and perfection in conducting public debates with respect for interlocutors and validation of the individual by freely practicing one's social life were developed (Rogala, 2015, p. 28).

6.1. Information as a commodity

The importance of information for the development of modern societies has resulted in the fact that it has become a commodity that has a price, is produced on the market and for the market, stored, and then sold with regard to the needs of the recipient. This product of the information age is as important to the national income as capital, labor, natural resources and energy, as the economist Fritz Machlup emphasized, attributing it to a separate sector of the economy – ‘knowledge production and distribution’. The development of information and communication technologies at the turn of the 20th and 21st centuries calls for naming this period the fourth revolution – after Copernican, Darwinian and Freudian – which the Italian philosopher Luciano Floridi in his book *The Fourth Revolution* made an autonomous discipline: the philosophy of information (Tworak, 2018, pp. 13–14).

Since information has become a commodity, its creators and recipients are tempted to include both authentic and fake news in the mass and electronic media. In the social media half-truths, post-truths¹ and untruths spread very quickly. The stimuli for their development are ‘information bubbles’ and a short life of information. The excess of news and speed of the Internet make any possible *dementi* to disappear at an equally quick pace. The omnipresent mass media provide information that, freely designed, manipulates the recipient, determines political decisions, the functioning of markets, and communication in the information society (Babik, 2017, pp. 76–83).

¹ The term ‘post-truth’ first appeared in *The Nation* magazine in 1992 on the Iran-Contras scandal. Its prevalence is related to Brexit and Donald Trump’s communication manipulations. In 2016, the editors of the Oxford Dictionary announced it as the word of the year.

Defense against disinformation campaigns in German public space becomes the subject of many scientific conferences and journalists' deliberations. It is being elevated to the status of a national defense capability and therefore should be controlled by governmental authorities. The European Union and NATO member states have increased their commitment to initiatives that address contemporary threats to the information environment. In 2015 in the European Union the East StratCom Task Force was created. It reports, explains, reveals and analyzes disinformation tendencies originating in the Russian state and disseminated in the media space of the Eastern neighborhood, as well as implements the EUvsDisinfo media project that provides information on identified false facts. The activity of the Riga Strategic Communications Center of Excellence (NATO StratCom COE) should also be mentioned. According to German observers, eliminating the mechanisms of propaganda and manipulation encounters numerous problems, such as staff shortages and under-financing of the first initiative. The German side points out that the continued presence of fake news can no longer be treated as an unpleasant phenomenon accompanying Internet communication, and emphasizes the citizen's right to know about the author of the information and its sources of financing (Tetzlaff, 2019, p. 69). Internet of Things, services offered by applications, dominance of the so-called Big Five (Apple, Google, Microsoft, Amazon, Facebook), on the one hand, testify to social changes, but on the other – they indicate the need for legal regulations, as the use of digital facilities and data protection must be treated on a par with ownership (Klotz, 2011, p. 25).

6.2. The value of communication in German democracy

In the European circle of political culture the democratic states, which shaped the principles and values that apply to them in the long process of civilization development, prevail. Democratic procedures cannot eliminate political populism which sometimes transforms a democratic system into a semi-democratic one, as is the case in Latin America (so-called *démocrature*) where free and direct elections are used to elect authoritarian power. A democratic system requires conscious civic participation in social life and communication processes, which is associated with a high information culture and skills of selecting and analyzing data. In the information and knowledge society, the phenomenon of media prosumption is becoming a *sine qua non* for combating indoctrination, populism and manipulation.

Chancellor Angela Merkel, aware of the importance and seriousness of relations with public opinion, in 2010 appointed Steffen Seibert, a longtime journalist from ZDF, a spokesman and head of the Press and Information Office and established a unit responsible for political strengthening of the society's 'defense forces' by, among other things, a censorship of the content of Facebook, Google and Twitter. Victims of fake news and hate speech received a round-the-clock legal protection. The law passed by the grand coalition and the SPD on September 1, 2017 (Netzwerkdurchsetzungsgesetz – NetzDG) came to the rescue, obliging social network operators to remove punishable content within 24 hours of receiving the complaint, and in ambiguous situations – within 7 days. Systematic violation of the law is punishable by a fine of EUR 5 million. The intensification of the government's political educational efforts affects particularly the most vulnerable groups of 'Russlanddeutsche' and Germans of Turkish origin living in a multicultural German society (Knauf, 2016).

Political communication 'bonds' society and becomes an added value at the macro level. The dialogue approach in the public sphere offered by J. Habermas, which is complementary to liberal democracy, found its expression in the German formula of communication between citizens and political elites. The norm in German public culture is to respond to information needs and to be interested in all the public issues. No question posed to public sphere authorities remains unanswered, even if negative. Responsive websites of many state institutions, maintained in a uniform layout, are an undeniable advantage in communication. Standardization and integration of state offices in cyberspace through the elimination of unnecessary services, as well as cohesive navigation and graphic identification, not only reduces costs but also facilitates quick identification. Transparency of official documents, acts and resolutions, especially those with financial consequences, is common.

The multiplicity and quality of debates – which are a form of direct dialogue with state institutions in the German public space – sometimes go beyond the requirements of reaching a consensus demanded by J. Habermas. This sphere relates better to A. Giddens' communicative democracy in which social movements, non-governmental organizations and individual citizens pursue their own particular interests and at the same time conduct a dialogue, learning tolerance and acceptance of other views. High rates of satisfaction with the functioning of democracy in Germany (the percentage of dissatisfied people in the years 2014–2018 never exceeded 5–6%) confirm the rightness of the

chosen direction (Statista, 10.01.2019). Thanks to new communication and information technologies which enable rapid, direct interaction, the German road to the electronic republic described by L. Grossman seems to be a sealed one (Dobek-Ostrowska, 2004, pp. 144–146).

An example of a direct message to citizens, as well as feedback where voters influence political decisions, is the Pirate Party which won 2.0% of the votes in the 2009 Bundestag elections and 2.2% in 2013. By using various online platforms and social networks enabling 24/7 contact, the image of a non-hierarchical party was created, wishing to strengthen the political activity of citizens and their influence on decisions made by governmental authorities. In place of the online editorial offices settled in party headquarters, responsible for the substantive shape of digital party communication, the party opted for networking of its members and supporters. The party mobilized a large group of people, who had so far not been associated with any political activity, and drew attention to the deficit of transparent presentation of the programming content of the ‘old’ parties and the lack of a proper system of political participation. Communicating according to the principle of Liquid Democracy introduced by the party, as a mixed form between direct and indirect democracy, ‘(...) involved each participant in deciding on the form of representing his interests and an extent to which it happens. One can request the return of the voting right to the seconded person at any time without waiting for a new term of office.’ (*Was ist Liquid Democracy*, 2012). The Pirates allowed communication in the broadest possible integration of individual offers, as well as joining the discussion of both supporters and opponents of their political program. The form of membership meetings and party congresses has also changed, as prominent party politicians rarely attend open public debates. Instead of this, there is a detailed discussion on the texts of the resolutions. A valuable instrument for active participation of party members is the LiquidFeedback platform, on which opinions are created or decisions are prepared. In place of the classic vertical structure of the party, the ‘many-to-many’ communication model was used, which created a network and expanded the group of interlocutors. Admittedly, idle discussions and problems in making key decisions have pushed the party on to the margins of the German political scene, but the party had shown that open government based on the principle of open, direct participation of citizens, can complement representative democracy, and the new media create an opportunity for an open dialogue with citizens (Janicka, 2012).

Nowadays, using social media for engaging and mobilizing followers have become a standard, an example of which was the campaign of Emmanuel Macron. The 2017 Bundestag elections also went down in history as exceptionally innovative and digital. CDU and SPD, thanks to their own applications and responsive websites, used door-to-door direct communication with voters based on the analysis of these data. Microtargeting conducted personalized, cheap and effective election communication, and segmenting political groups facilitated the differentiation of content targeted at potential voters in order to convince the undecided and to mobilize the weary of elections (Kruschinski, 2017).

6.3. Information economics in German politics

German – Soviet / Russian relations are an excellent example of the information impact on the economic performance of both countries. Since the beginning of the twentieth century, a new stage of mutual relations has been taking place, based on mutual empathy, financial assistance, an understanding of German and Russian interests in the international arena, not to forget about the personal relations between the leaders, which have long shaped priority of Russia in German eastern policy. This period had a fundamental impact on the contemporary perception of Russia by the German elite, so different from Polish or European views. This paradigm shift can be noticed in the case of the war in Ukraine, since the outbreak of which clear voices of support for Russia's actions have appeared in the German public space. The Russian Federation has been successfully using the extensive information apparatus of the state media, the so-called opinion leaders, agents of influence, but also cells capable of carrying out complex information operations, including psychological ones, and special forces. As a result, government institutions such as the Petersburg Dialog and Stiftung Deutsch-Russischer Jugendaustausch, political parties (part of the CSU, AfD, die Linke, NPD, Rosa Luxemburg Foundation), economic bodies (Deutsch-Russische Auslandshandelskammer, AHK), concerns (EON, BASF, Siemens, Bosch) and the world of culture and media in the person of NDR presenter Anne Willie, journalist Hubert Seipel, actress Hanna Schygulli have become a propaganda tube of Russian interests. This group was also joined by artists, businessmen and former politicians, who in December 2014 issued an appeal under the slogan 'War in Europe again. Not on our behalf.' The contemporary strength of pro-Russian

sympathies in Germany comes from the tradition of cooperation between the two countries (the German-Russian ‘spiritual community’) and from Germany’s resource needs. For ‘Russlandversteh’er’ Putin’s policy is a counterbalance to the pro-American policy of the Brussels bureaucrats and Ukraine remains a province of the Russian empire. Karl Schlögel, a German historian, specialist on Russia and Central and Eastern Europe, believes that ‘Germany fell victim to the Russian information war’ (Glusi, 2015), and historian Stefan Plaggenborg called this sentimental attitude of Germany towards Russians ‘Affenliebe’ (Hoffmann, 2016). In Russian historical memory dominate the role of the Germans in strengthening the structures of the Russian empire in the 18th and 19th centuries, cooperation between Russia / the USSR with the Weimar Republic or Brandt’s *Ostpolitik*, as well as building a partnership with Russia, from ‘strategic’ to ‘cordial’, in the 1990s. The long-time chairman of the CSU, Horst Seehofer, repeatedly spoke out against the sanctions against Russia, which discredited the official position of the federal government. The meaning of the sanctions was also questioned by the Minister of Economic Affairs, Sigmar Gabriel, and Eckhard Cordes, chairman of Ost-Ausschuss, because in their opinion, ‘Russia will not be an easier partner if it is isolated and economically hit’ (Beise, 2015). Matthias Platzeck, the president of the German-Russian Forum who is considered a reasonable and realistic politician (Hoffmann, Schepp, 2014), went even further, calling on the West to legalize the Russian annexation of Crimea. Former members of the SPD, such as Helmut Schmidt, Egon Bahr, Gerhard Schröder and Klaus von Dohnanyi, also argued for a distinctly weaker position towards Russia (Janicka, 2018). Russia, as the world’s seventh economic power, is an important link in Germany’s economic development. Mutual trade relations provide 350,000 jobs in Germany and another tens of thousands in Russia (e.g. Volkswagen, Metro). Isolation and sanctions were not in the interests in either side (Cordes, 2014).² The pro-Russian mainstream in German society influences the conservative attitudes of subsequent governments. These, in turn, perceive Russia as a force stabilizing international security and appreciate its role in solving strategic issues important to the West, such as the fight against terrorism, the conflict in the Middle East, the Iranian nuclear program, and the stabilization of North Africa. As a result, a euphemistic term ‘conflict’ has become established in the public language

² E. Cordes, Wirtschaftssanktionen kommen uns teuer zu stehen, *Handelsblatt* 21.03.2014, <http://www.handelsblatt.com/politik/international/eckhard-cordes-wirtschaftssanktionen-kommen-uns-teuer-zu-stehen/9648490.html>.

instead of 'war', and it quickly disappeared from the front pages of newspapers anyway. The pro-Russian atmosphere of public opinion is also conducive to the acceptance of the project of the Nordstream 2 gas pipeline located at the bottom of the Baltic Sea. Due to the presence of former chancellor Gerhard Schröder in the structures of Gazprom, it has become a political source of conflict in Europe. In the comments of German publicists arguments about a private enterprise that cannot be influenced by the state and in which five Western European companies also participate are emphasized. Attention is drawn to the change in the country's energy policy, closing of nuclear power plants and resigning from lignite and hard coal energy, which forces the import of 120 billion m³ of gas annually. The sanctions against participating companies, announced by President Trump, are assessed as forcing the German side to purchase 20% more expensive LPG from the USA, while eliminating Russia from the market. This narrative, emphasizing the energy security and purely commercial nature of the project, is the *Meisterstück* of German information policy (Sommer, 2019).

6.4. Information economics in German media

For an average German person from the age of 14 the Internet is one of the most important sources of information. In 2019, 71,1% of German society looked there for the necessary data. Almost 81% got information from friends and acquaintances, and 54,8% were watching news on TV (Statista, 2019). Although television plays a secondary role as a source of information, the political elite assigns it a superior role in shaping public opinion. In the context of media contacts with politicians it is mentioned on a par with the print media. Famous personalities are a valuable news factor and relations capital, which is why they care about being present in these media. The question of how they are perceived by the public remains open. A 1990s German study of prominent personalities found that only two-fifths of respondents mentioned politicians who were lagging behind members of the cultural sector. Among those indicated, people with leadership functions in the state clearly dominated, so in the political sector there is a correspondence between the status of the elite and the status of a prominent. As a result, the media was assigned an important selective function, as politicians' careers largely depend on their media appearances. Political elites are at one level between the formation of public opinion and centrally undertaken decision-making processes in relation to a society

(Hoffmann-Lange, König, 1998, p. 455). In Germany, modernization-type campaigns were conducted, with professional marketers and advertising agencies playing the main role. The daily press also makes no secret of its political preferences and favors one party. The spiral of silence theory, formulated by Elisabeth Noelle-Neumann and based on the support of public television for the SPD in 1976, indicates that the media are capable of shaping the climate of opinion (Adamowski, 2008, p. 102).

According to the research commissioned by the Federal Association of German Press Publishers (BDZV), compared to Europe, Germany has the greatest potential for readers of the printed press (mainly subscription). Despite the development of the digital version, 38.1 million people still use the paper press every day, which constitutes 53.9% of citizens over the age of 14.³ Since every second German citizen reads a newspaper every day, regardless of its version, the printed press market is not only an economic potential, but also a huge moderator of public opinion. (Stabile Reichweite, 2019). German journalists contributed to the detection and publicity of the corruption links between politics and business. They resulted in trials and court judgments, but most of all – in a change in the law on financing political parties. The best known examples in the history of Germany include the scandals concerning illegal financing of political parties in exchange for solutions favorable to companies. In the Friedrich Karl Flick scandal, the Ministry of Economy exempted the company from tax on the purchase of Daimler-Benz shares in 1975, which allowed for savings of 986 million marks. Another scandal concerned illegal CDU funds which were supplied by private companies, including Thyssen which supplied it with the sum of 1.3 million marks. As a result, ‘the father of the union’ Chancellor Helmut Kohl walked away from politics in disgrace when he refused to reveal other donors. During the systemic transformation of the former East Germany, investigative journalists discovered the backstage of the Leuna refinery privatization and the circumstances of its sale to the French Elf concern (Matykiewicz, 2007, pp. 297–298).

Information on the scandal of the German Audi concern, related to the manipulation of software measuring the level of exhaust emissions (lowering CO₂ emissions), was published in the US in 2015 and had far-reaching economic consequences for the compa-

³ The regional, subscription-based press is read every day by 30.9 million people, and the digital version – by 8.6 million. In the group of people with higher education holding high positions, the percentage is 62.3%, and among university graduates – 56.4%. 80.5% of readers under the age of 30 read the digital edition at least once a month, but 28.7% still read the newspaper in print. People over 50 constitute the largest group of supporters of the paper press (68.7%).

ny. The first reports of a new method of fraud appeared in the pages of the *Bild am Sonntag* daily, when it reported the findings of the California Air Resources Board (CARB) environmental protection agency. Since the outbreak of the scandal (2015–2019), the company has suffered losses of EUR 3.4 billion. Following the arrest of Stadler, new CEO Herbert Diess ordered a reform of management structures to accelerate the transition to electric cars, which was to repair the company's damaged image and reputation. This is the second result of the war between 'clean diesel' and Toyota's hybrid technology, which has led to the development of a competitive company redirection of the automotive industry towards environmentally friendly cars. This example illustrates business ties in a global economic environment where the undesirable actions of a single economic entity matter to a country, region, or industry as a whole.

6.5. Information economics and social perception

The renaissance of communist and fascist ideology in the post-unification period forced the necessity of creating a new model of social communication. The information activities undertaken by the national information services proved to be a successful educational experiment. The location of the explanatory function of the state in intelligence structures is a novelty on a European scale and a research subject in the axiological sphere.

In the analysis of the threats of right-wing extremism, the multifaceted and conscious cooperation with the society is of great importance. Without this commitment and acceptance of the reconnaissance activities of the civil services, proper penetration of extremes is impossible. The first step in reaching the general public was the idea of protecting the constitution through education (German: *Verfassungsschutz durch Aufklärung* – VdA), which was the result of the report of the 2nd parliamentary control commission of May 16, 1969, commonly known as the Hirsch report (Bundesamt, 2000). The federal government obliged the constitutional protection services to raise awareness of the need for the existence of the Federal Office for the Protection of the Constitution (German: Bundesamt für Verfassungsschutz, BfV), its specific role and tasks. It included indications for wide-ranging education, prevention and public presentation of the results of operational activities and potential threats. During the conference of the Ministers of the Interior in 1974, it was decided to send recommendations on the VdA concept to national offices. As a result, special working units were established in all countries to

implement the above-mentioned concept. One of the fruits of these recommendations was the annual activity reports of the BfV, published under the supervision of the Federal Ministry of the Interior. Until the present day, they are one of the most important communicators between the services and the media and society. Since the 1990s, the BfV itself have begun to conduct extensive information activities. First, media communication has been improved, a reliable dialogue with journalists has been conducted based on the appropriate selection of the content presented and its professional evaluation. Mass media have more and more frequently favored people from the close circle of the Ministry of Internal Affairs, avoiding pseudo-experts who had often misinterpreted the facts. Due to the extremely delicate matter, the representatives of the office have been initiating press releases themselves, as well as authorizing and interpreting them using media relations tools. The far-right in the Federal Republic of Germany remains a regional phenomenon, and NPD extremists have never sat in the Bundestag since the founding of FRG. In the last decade (2009–2019), they won seats only in two East German Landtags (in 2011 in Mecklenburg-Vorpommern – 5 seats, in 2009 in Saxony – 8). Many years of educational activities have confirmed its marginal role in social awareness (Janicka, 2015).

Another extremely successful communication project was the public debate on the German national identity which, after the period of Nazi totalitarianism, had been for years ignored and replaced by constitutional or economic patriotism. The post-unification effort related to building a sense of security, economic development of the country and its role in the surrounding world contributed to the increase of patriotic awareness, and being a German stopped being a shameful issue. The first attempts to deal with the subject of patriotism and the sense of national community were made a year before the elections to the Bundestag in 2005. The inspirer of the public debate was the then president of West Germany Horst Köhler, who honestly admitted that he loves his country. None of his predecessors dared to make such a public confession. The third president of the young Bonn republic, Gustav Heinemann, confirmed in an interview his love for his wife, but not for his homeland. The play-safe attitude of the SPD politician was related to his personal involvement in the policy of FRG's neutrality and creating opportunities for the country's unification. The leading politicians of the CDU, headed by the future Chancellor Angela Merkel, saw the need to involve German citizens in taking care of their country by developing a patriotic spirit. All economic reforms have been carried out with the support and understanding of the broad masses of society. In 'reasonable

patriotism' (*vernünftiger Patriotismus*) the condition of economic growth and European integration was recognized (Stoiber, 2004).

The awareness of numerous internal threats and the lack of a sense of security is the most fundamental result of an uneven development of countries on a global scale. Already in the 1990s, the then Minister of the Environment in the 5th Cabinet of Helmut Kohl (1994–1998), Angela Merkel, argued about the need to construct an integrated energy and climate policy, necessary from an ecological and economic point of view, as well as due to the risk of terrorist threats. Enhancing the efficiency of the German economy as well as increasing the level of employment in the face of progressing globalization with the use of environmental protection mechanisms were of priority importance, which resulted in a change in the employment policy in this sector (approx. 1 million).⁴ The German government's plans are nothing more than a continuation of the ambitious plans of the North-South Commission of 1977, also known as the W. Brandt commission, which proposed the establishment of an international agency for renewable energy. The German Federal Republic drew attention to the need for broadly understood cooperation of as many countries as possible in terms of the growing demand for energy with rapidly depleting non-renewable energy sources. Germany has become a center of new technologies and innovative energy solutions, and in 2011, a branch of *Internationale Agentur für Erneuerbare Energie* (the International Renewable Energy Agency – IRENA) was opened in Bonn. Thus, information standards were created on a global scale, which combined with the 'knowledge industry' resulted in faster growth, contributing to development at the meso level.

The German government's actions received unexpectedly much support from the public when the tsunami in Japan caused a failure at the Fukushima nuclear power plant on March 11, 2011. The very next day after the disaster, 60.000 people formed a 45-kilometer long chain of people from Stuttgart to the nuclear power plant in Neckarwestheim. Chancellor Angela Merkel announced in the Bundestag the complete nuclear abolition in favor of renewable energy sources. The decision to shut down eight out of seventeen German reactors⁵ pleased nuclear opponents, whose percentage

⁴ Angela Merkel's statement in archival documents available on the official website of the Federal Ministry of Environment and Reactor Safety, Angela Merkel, *Umweltschutz kann Kosten senken* http://www.bmu.de/pressearchiv/13_legislaturperiode/pm/916.php (10.09.2012).

⁵ The seven oldest nuclear power plants were shut down, and the Krümmel power plant, which had been out of order since the 2009 accident, did not get reconnected to the grid. The process of shutting down remaining nine plants has been spread over time until December 31, 2022, in line with their end-of-life dates.

jumped to 70% (Mundt, 2012). On the other hand, the willingness of citizens to bear the increasing costs of the new energy policy has declined sharply. According to TNS Emnid, 41% of respondents were not ready to incur higher costs, and among Eastern Germans the percentage was as high as 52%. Only 10% of respondents in the West and 4% in the East were ready to incur additional expenditure higher than EUR 20 per month on the development of eco-energy (Janicka, 2013). The Ministry of the Environment launched information on nuclear safety policy on its websites, and citizens were included in a broad debate, participation in seminars and lectures. Currently, public opinion is divided, with a slight majority of opponents of the atom (49.5%). Despite the increase in eco-energy prices, 44% of citizens have opted for it. All citizens participate in the costs of its expansion, although its prices have increased by 80% since 2012. The surcharge is 6.41 cents per kilowatt hour, which is EUR 256 per year with an average consumption of 4.000 kWh per family (Umfrage, 2019).

Conclusions

The form of communication in the German political system closely relates to the idea of positive freedom by Thomas H. Green and the Hegelian primacy of an ethical being over the state in a civil society. The political pluralism lasting since the post-war times and the growing multiculturalism of German society perpetuate tolerance, the distribution of political power, they foster debates, polemics, and understanding of the state's priorities.

Bearing in mind Geert Hofstede's research on organizational culture, there is a small distance of power in German democratic governance which, although correlated with the country's wealth, is not a necessary condition for the existence of democracy, as shown by the example of Singapore. The development of the country is influenced by the citizens themselves in cooperation with re-elected leaders responsible for the fate of the country (only 8 chancellors between the years of 1949 and 2019). In Germany, efficient communication and bottom-up identification with the country influences the acceptance of its policy, forms of economic development and costs related to it. It is necessary to maintain a Western-style democracy that must take into account the economic and environmental consequences. Its survival requires new measures, as the concept of boundless 'economic growth' seems obsolete now.

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VII

The Economics of Information in the Global Economic Life on the example of the USA-China trade war

(MARCIN LESZCZYŃSKI)

Introduction

The trade war between the USA and China is one of the effects of a redefinition of the role of individual states in the world economic life. As part of this world, countries have fully become actors of global competition. The key factor in building countries' position is their ability to shape their own competitiveness. That, in turn, is affected by information asymmetry, the effects of which are also visible at the international level. Here, too, the phenomena of *moral hazard*, *adverse selection*, *signaling* or *auto-selection* can be identified. Countries have developed the tools for elimination and stimulation of the negative effects of information asymmetry. The most important of them is reputation which is the basis for building country's credibility among others participants in economic practice. As noted by C. Shapiro, reputation is important only in markets with imperfect information. According to that statement, it can be concluded that the growing interest of scientists in the issues of state's reputation confirms the important role of imperfect information in the international environment.

The aim of this study was to define the role of reputation in reducing information asymmetry in the global market. In the first part the basic phenomena of information asymmetry in the international environment were presented. Next, the role of global reputation in shaping the mechanisms of weakening the effects of information asymmetry was discussed. In turn, in the following sections the role of policy and diplomacy in shaping trust in the government and demand for products from a given country, based on the example of the trade war between the US and China, was presented. Theoretic deliberations in this publication are based on the Polish-language publication *Ekonomia informacji w globalnym życiu gospodarczym* ('The economics of information in a global economic life') from 2020. In the presented work they constitute the basis for the analysis based on a practical application including an overview of the global consequences of the trade war between the US and China.

7.1. The economics of information in the international environment

Information economics has its theoretical base in undermining the paradigm of perfect information (Deszczyński, 2020). Information economics in economic processes comes down to the situation in which the parties to the transaction do not have complete information that would allow for a proper assessment of the risk. In the theory of information economics, these cases have been described in the seller-buyer, insurer-insured, employer-employee, or lender-borrower relationships. In a situation where one party to the transaction has more knowledge about their own skills, the probability of default or the quality of the product sold, a phenomenon known as *moral hazard* may arise (Arrow, 1963; Akerlof, 1970). The mechanism that describes wider the consequences of *moral hazard* is *adverse selection*. G. Akerlof (1970) presented this problem, inter alia, on the example of the insurance market. The literature also describes mechanisms that allow for the elimination of information asymmetry, which include *signaling* (Spence, 1973) and *auto-selection*, also referred to as *screening* (Rothschild, Stiglitz, 1976). M. Spence in 1973 analyzed the role of information asymmetry in a labor market. The concept of *auto-selection*, in turn, can be related to the research of M. Rothschild and J. Stiglitz (1976) who transfer this mechanism into the insurance market.

The above mechanisms can also be identified at the state level. B. Herzog (2014) divides countries into those with solid and those with weak macroeconomic foundations, and their governments into those committed to pursuing a policy that maintain good foundations and those that bluff. In this situation, the bond yields of countries with similar macroeconomic fundamentals will be similar. However, governments are more knowledgeable than investors about what they will do in the future, which encourages the emergence of moral hazard. In this situation, countries that pursue a policy aimed at maintaining a solid macroeconomic foundation are not willing to pay investors the same amounts as bluffing governments, which leads them to believe that risk premium is overstated. A consequence of this status quo is the search for alternative sources of financing and a decline in the supply of good quality bonds (Herzog, 2014).

A. Drazen (1997) indicates that signaling can be used to assess when the type is unknown. He also adds that investors' inference is intuitive, because the effects of state-led initiatives are not always predictable (Drazen, 1997). B. Herzog writes that these mechanisms can be analyzed from the perspective of the state's participation in intergovernmental organizations and the resulting consequences. In the case of euro area countries it is, for

example, the European Stability Mechanism. In turn, in the European Union there is a talk about the *excessive deficit procedure*. Additionally, B. Herzog identifies introducing by states internal independent financial institutions and automatic budgetary rules (Herzog, 2014).

J.T. Dalton and T. Goksel (2009) examine information asymmetry through the lens of international trade. In their study, they analyze the mechanism of importing to the American market Japanese and French cars, the popularity of which has increased after the oil crises. The researchers show the impact of information asymmetry on the decisions of importers and take into account the time factor that relates to the process of learning and obtaining information about exporters and their products (Dalton, Goksel, 2009). The presented regularity refers to the *country of origin effect* identified in the 1960s by R.D. Schooler (Schooler, 1965). Research on this issue in the context of the economics of information was also conducted by Y. Shi and A. Ono (2015). Analyzing the market of used cars and wines, they found that the country of origin can be a signal to the consumer and can influence his purchase decision.

7.2. Reputation as a tool of eliminating negative effects of information asymmetry in the international environment

The actions of individuals carry information, and these lead to changes in the behavior and functioning of the behavior and functioning of the market (Stiglitz, 2002). Individuals do not act only through the prism of their own needs, but take into consideration how those activities will be perceived by others (Stiglitz, 2002). These processes relate to building reputation, credibility and trust. In the considerations cited, the researchers pointed to the important role of reputation in reducing the information asymmetry. Reputation is a general assessment of a given subject by the public (Fombrun, van Riel, 1997). C. Shapiro (1983) treats reputation as a signaling tool, pointing out that it only matters in a market with imperfect information. If a consumer does not have complete information about a product, he may rely on the quality of products made in the past. It is also pointed out by B. Klein and K. Leffler (1981) and S. Kaplan, P. Roush and L. Thorne (2007).

Ch. Fombrun indicates that reputation is an informational signal that increases the observer's trust in a given entity (Fombrun, van Riel, 1997). Reputation allows the entity to generate a premium in the prices of its products and services (Fombrun, van Riel,

1997), which can be defined as a *reputation premium* resulting from the built up *reputation capital* (Leszczyński, 2019). From the perspective of information asymmetry, investments in reputation may prove good product quality (Fombrun, van Riel, 1997, 2007). G. Akerlof (1970) indicated actions that can combat imperfections of information, i.e.: warranty, brand, network, certification. In each of these cases, trust that conditions functioning of the market and decisions of its participants is of key importance.

When analyzing the presented mechanisms, one can refer to the aforementioned *country of origin effect*. The term ‘made in’ owes its origin precisely to information asymmetry and to the *temptation to abuse* by German producers who at the end of the 19th century supplied their products to the British market, suggesting that they were products of England. England’s response was to force German manufacturers to use the inscription ‘Made in Germany’ (Leszczyński, 2019). Referring to the indications of G. Akerlof, one can state that the *country of origin effect* concerns the category of brand. In the literature appears the concept of a national brand, introduced by S. Anholt (Anholt, 2013). In this light, the country of origin is a brand and a promise of product quality.

In addition to the brand, certification is also very important. It is characteristic especially for products perceived as premium goods. The first example is Switzerland, which is famous for the best quality watches signed with the ‘Swiss made’ mark. Research (Feige, 2016) shows that consumers are willing to pay twice as much for Swiss watches as for watches from other countries. What is of great importance in this market is the certification. Its history on the Swiss market stems from the producers’ *temptation to abuse*. The first certificate named ‘The Geneva Seal’ was introduced by the Geneva authorities in 1886 and was intended to counteract the abuse of manufacturers who were falsifying the Geneva watches (ch24.pl).

On the one hand, the certificate confirms that the watch was made in the canton of Geneva, and on the other, it indicates meeting the quality requirements. A similar pattern can be noticed in the wine market, here the research results also show the influence of the country of origin on the price (Lee, Gartner et al., 2018). In this market, there are also price differences among products from a given country, which can be explained, inter alia, by the introduction of wine classification which is to eliminate information asymmetry. As stated by M. Rekowski, as a result of the first wine classification in the 19th century, producers who were awarded the highest class of wines – *premiers crus* – could sell them at the highest price (Rekowski, 2013).

J. Stiglitz and A. Weiss (1981) point out that the interest rate itself may be the signal for a lender. This principle is reflected in the government bond market, where debt securities of countries in a bad financial condition and with low credibility are characterized by higher profitability. Countries with lower bond prices are perceived by investors as more risky. In this area, of key importance is the so-called bond spread – or risk premium, i.e. differences in the yields of bonds of a given country and countries perceived as safe (Waszkiewicz, 2014). Another indicator is the creditworthiness assessed by rating agencies. In order to be well graded, it is not enough for the country to pay off its debt on time (Waszkiewicz, 2014).

A broader perception of a state plays an important role. B. Herzog (2014) points to the political reputation, i.e. the government's commitment to building the competitiveness of the economy and fiscal stabilization, which are basis for minimizing concerns on the market. In the market of debt instruments, the so-called general *reputation of the state* gets increasingly important. This measurement is carried out by the Reputation Institute in the annual Country RepTak report (Reputation Institute, 2020). Based on the results of the research (Leszczyński, 2019), it can be concluded that the overall reputation is strongly related to the assessment of the countries' competitiveness, including their economic reputation. The analysis of economic data also shows that the overall reputation of a country may explain differences in bond yields and risk premiums (reputation premium), country brand valuation (reputation capital), and export volumes (home country competitiveness) (Leszczyński, 2019).

7.3. The trade war between the USA and China – the genesis of the conflict

At the turn of the 20th and 21st centuries, China became one of the fastest growing economies in the world, reaching 75 times higher GDP in 2019 compared to 1980 (World Bank, 2020), and since joining the WHO structures, its GDP has increased by USD 13 trillion. For comparison, since 1980 US GDP has increased more than 7 times, and since 2001 – by less than USD 11 trillion (World Bank, 2020). Currently, the US GDP is over USD 21 trillion, while China's – over USD 14 trillion. On the Forbes Global 2000 list in 2020, the top 10 largest companies in the world include as many as 5 companies from China and 4 from the USA (Forbes, 2020). In the case of the most valuable brands in the world, 6 companies from the USA and 3 from China are in the top 10. The total

value of American brands included in the ranking is USD 3.2 trillion, while Chinese brands – USD 1.3 trillion (Brand Finance, 2020). These countries are also perceived as one of the most important world leaders (U.S. News, 2020). Their political and economic influence is highly rated. Although some analyzes (Gallup, 2020) indicate that the US is performing better in this respect, in some studies China is ahead of the US both politically (U.S. News, 2020) and economically (Pew Research Center, 2020).

The beginning of the trade war between the US and China dates back to 2018. Following the statements of Donald Trump's adviser – Peter Navarro – it can be concluded that the causes of the conflict relate to the US losses due to trade with China. L. Kapustina et al. (2020) indicate that the sources of this conflict include: the desire to reduce the US deficit in trade with China, reducing unemployment in the US, limiting China's technological capabilities, limiting the growth of China's military power and reducing the US budget deficit. E. Bekkers and S. Schroeter (2020) indicate similar reasons, i.e.: trade imbalance between the US and China, increased reciprocity of applied custom tariffs, reinstating of jobs in the US and the fight against the effects of Chinese policy – poor protection of intellectual property, forced transfer of technology and subsidizing enterprises by the Chinese government.

The sources of this conflict go back to 2001, when China joined the WTO, which meant that after 15 years of membership it would automatically receive the Market Economy Status – MES. Non-Market Economy (NME) status, obtained by China in the accession protocol, was associated with restrictions for the Chinese economy, mainly in the area of imposing anti-dumping duties by economic partners, which gives them a strong tool in shaping political and economic relations with China (Skrzypczyńska, 2015). The expiry of this status was supposed to take place in December 2016, but both the US and the European Union questioned the legitimacy of automatism, thus treating China as a non-market economy and retaining the entire spectrum of tools allowing for the use of anti-dumping measures. It was precisely the use of this situation by the USA that was the main reason for the so-called trade war with China. Global domination of one of these countries in the future may depend on its effects.

In December 2017, in the National Security Strategy, president Donald Trump identified China and Russia as the greatest threats to the US. He also stated that the military power of the USA is of key importance, and pointed to the rebuilding of the American economy as one of the conditioning instruments (Polski Instytut Spraw Międzynarod-

dowych, 2017). The tools that were supposed to ensure rebuilding the economy of the United States included:

- duties – 25% customs duty on 818 products from China worth USD 34 billion (July 2018), 25% customs duty on 279 products worth USD 16 billion (August 2018), 10% customs duty, increased in May 2019 to 25% on products worth USD 200 billion (September 2018);
- administrative restrictions – introducing Chinese companies to the so-called entity list (US Department of State, 2019);
- instrumental introduction of legal changes – banning of: downloading Chinese TikTok and WeChat applications in the US; cooperation of American companies with companies from the black list, e.g. Huawei; the use of equipment considered a threat to the security of the USA by American companies (Rutkowska, 2019); the use of the TikTok app by the US military (Malinowski, 2020).

7.4. Information economics on the example of the trade war between the USA and China

At the same time, the so-called information war is taking place between the US and China. Its sources can be found in the confrontational America First narrative which was one of the reasons for Donald Trump's victory in the presidential election. It was in this campaign that Donald Trump identified China as one of the greatest threats to the US, and it was one of the main issues raised during the campaign (Appelbaum et al., 2016; Beech, 2016; Haberman, 2016). The information conflict that started during the campaign can be divided into two areas:

- global reputation of the USA and China,
- trust in the American and Chinese business.

As M. Taddeo notes, information warfare can be defined as the use of information technology to disrupt and control the enemy's resources. It is of particular interest to governments and intelligence agencies, and since the 21st century, information technologies have become increasingly important in this area (Taddeo, 2011). The essence of information warfare is, on the one hand, misleading through manipulation and distortion of information, and, on the other, protection against similar actions (Kryszak, 2017).

In the international environment, the communication activities of states fit into the concept of international public relations, the effects of which may depend on many factors (Ławniczak, Rydzak & Trębecki, 2009; Vercic, L. Grunig & J. Grunig, 1996, p. 32). Communication activities at the state level can be divided into several areas, e.g. national branding, public diplomacy or propaganda (Szondi 2006; Kaczmarek, Leszczyński, 2016; Janicka, 2018; Leszczyński, Rabczun, 2018). The information conflict between the US and China, according to the concept of the specialization of international public relations, should be classified as propaganda. G Szondi (2006) describes it as:

- influencing,
- creating crises,
- discrediting competitors,
- justifying hostilities,
- manipulating public opinion.

In the light of information economics, an information war is supposed to lead to lowering the confidence of the environment in competitors, which may translate into the decision-making processes of consumers, investors, governments and intergovernmental organizations. Currently, it is intangible assets that constitute an important element in building competitiveness on the market (Kaczmarek-Śliwińska, 2014). Information warfare activities are to deepen information asymmetry, the consequence of which may be an image crisis. D. Tworzydło points out that the image crisis may translate into an economic crisis (Tworzydło, 2017). In this context, it can contribute to lowering the country reputation premium, reputation capital and home country competitiveness.

7.5. Global reputation of the USA and China

Regarding public confidence in the US and Chinese governments, it should be noted that in the Best Countries ranking, China scored 4 points in 2020 (out of 100 possible), which is an increase of 1 point compared to 2016. On the other hand, the United States scored 16 points in 2020, recording a drop by as much as 17 points compared to 2016. It should be mentioned that in this ranking the public assessed highest such countries as Canada (100 points), Switzerland (99) and Norway (99) (U.S. News, 2020).

Compared to China (4 points), the USA, with 25 points, comes off much better when it comes to the transparency of government actions, although it is still a low result

compared to other countries (U.S. News, 2020). US information activity may have undermined China's reputation. According to the concept of the halo effect, the perception of the country may be influenced by its leader. In 2020, Chinese President Xi Jinping was trusted by 19% of respondents in the global market, while Donald Trump was trusted by only 17%. For comparison, Vladimir Putin is trusted by 23%, while Emmanuel Macron is trusted by 64% of respondents, and Angela Merkel – by as much as 76% of respondents (Pew Research Center, 2020a).

According to the Reputation Institute data, the election of Donald Trump as the president of the USA translated into a weakening of the country's reputation by more than 8%, to 54 points (Reputation Institute, 2017). The results of studies conducted by the Gallup Institute (Gallup, 2020) and the Pew Research Center (Pew Research Center, 2020b) show a similar view. It was also connected to a decline in confidence in US-based companies (Edelman, 2017). It should be also noted that 68% of global public opinion perceived Donald Trump's trade policy in a negative way (Pew Research Center, 2020b). In 2020, the US reputation scored 59.6 points. This means that during the trade war the US reputation improved by 5.6 points. China's reputation, on the other hand, weakened from 48.8 in 2017 to 45.8. In this regard, the US is winning the information war with China, but it should be noted that the reputation of both countries is below the global median, which in 2020 amounted to 63.1 (Reputation Institute, 2020; Reputation Institute, 2017).

According to the data of Pew Research Center, in the international environment the US is perceived positively by 34% of respondents, while China – only by 24% (Pew Research Center, 2020). These results show the weakening of perception of both China and the US during the trade war (Pew Research Center, 2020; Pew Research Center, 2020c). For the global public opinion, the USA (27 points) is seen as an ally to a greater extent than China (5), both countries, however, are equally viewed as a threat (USA – 12, China – 13) (Pew Research Center, 2020d).

7.6. Trust in the American and Chinese business

The actions of the US administration aimed at limiting the possibilities for Chinese companies to operate on the US market were also informative. In 2012, the House of Representatives' Intelligence Committee determined that cooperation between US companies

and Huawei and ZTE may be risky, and that these companies have the ability to take over strategic computer systems in the US which the Chinese government could use in a conflict between these countries (Forbes, 2012). In late 2017, an official warning against the use of Huawei and ZTE was issued by the Intelligence Committee of the US Senate (Wyborcza, 2018).

Penalties for ZTE for cooperation with North Korea and Iran, prohibition of the use of Chinese technology products (e.g. Huawei) and applications (WeChat and Tik Tok), lobbying in other countries and preventing the cooperation of American companies (e.g. Google) with Chinese producers carry information value. Such actions by the US administration are aimed at lowering confidence in Chinese business. One should be aware that these types of tools can be used to influence the public opinion, e.g. there is a list of prohibited topics within TikTok, including criticism of the Chinese authorities or protests in Hong Kong (Hern, 2019), while Facebook user data was used by Cambridge Analytica in carrying out political campaigns (Gilbert and Ma, 2019; O'Sullivan, 2018).

The first area is the public opinion's assessment of the transparency of business activities in both countries. In this respect, in the Best Countries report in 2020 China obtained 16 points, while the USA twice as many, i.e. 32 points. Compared to 2016, China doubled the number of points, while the USA lost 8 points. These are very poor results compared to Canada (100), Norway (93) and Sweden (82) (U.S. News, 2020). Another factor is public trust in companies from China and the US. This measurement is carried out annually by Edelman. In 2020, trust in Chinese-based companies amounted to 38, while for the USA it was 53 (Edelman, 2020). Compared to 2016, China recorded a 5 point increase and the USA a 3 points decrease (Edelman, 2016). Confidence in Chinese companies is increasing among developing countries, in contrast to developed countries, where the perception of Chinese business is weakening (Brunswick, 2020).

The results of research conducted in Great Britain indicate that information about the Chinese origin of a brand lowers the trust that consumers place in it. Lenovo is such a case. Based on an assessment of the brand itself, trust for Lenovo among British consumers was 32%, but after disclosing its Chinese origins – it dropped to 20% (Feldman and Rowe, 2020). The biggest victim is Huawei, which is trusted by only 10% of British, while 22% say they will never choose this brand's products and 19% believe that they would choose this brand only as a last resort. Respondents also indicate that Chinese companies may be a threat to national security (Feldman and Rowe, 2020).

Similar levels of public confidence in Huawei and Chinese companies can be noted in Canada and the US (Angus Reid Institute, 2019). As a result of actions undermining trust in Huawei and due to the introduction of the above-mentioned restrictions, the brand was gradually withdrawing from foreign markets and strengthening its position in China.

In the second quarter of 2020, only 28% of the brand's smartphones got sold outside China, while sales in China accounted for 72% which translates into an increase of over 16 percentage points compared to 2016 (Huawei, 2017; Business Standard, 2017). In the second quarter of 2020, only 28% of the brand's smartphones sold went outside China, while sales in China accounted for 72%, an increase of more than 16 percentage points compared to 2016. Huawei's share of the number of smartphones sold in the Chinese market (Counterpoint, 2017; Counterpoint, 2020). The non-recognition of China as a market economy at the WTO forum was the foundation for a US diplomatic offensive in this area. One of the effects of these activities is limiting Huawei's ability to cooperate on the development of the 5G network outside the US. The analysis of the attitudes of European countries shows that 20 out of 31 analyzed countries have a negative opinion about cooperation with Huawei in this area, while 11 view it as a neutral or positive thing (Instytut Nowej Europy, 2020). In January 2020, countries that introduced restrictions on the use of Huawei products and technologies accounted for a total of one third of the world's GDP (Buchholz, 2020).

Conclusions

The importance of information asymmetry in shaping economic processes at the global level is as strong as in the case of the markets analyzed by G. Akerlof, M. Spence and J. Stiglitz. Countries, just like the entities analyzed in previous studies, have developed a number of mechanisms that allow for the elimination of information asymmetry. However, it should be borne in mind that the impact of information on the decisions of other market participants depends on a number of conditions that may disrupt these mechanisms. Those conditions include the information war between the US and China. As a result of this war, information asymmetry increased and the level of trust in both sides of the conflict decreased.

On the one hand, Donald Trump's confrontational narrative translated into a weakening of China's economic and political position. Raising social unrest and reducing the sense of security on the Internet, identifying China as the main source of the problem, led to a reduction and, in some cases, arresting the upward trend of confidence in the Chinese government, strengthening the negative country of origin effect, and changing business strategies of Chinese enterprises. The example of the conflict between the US and China shows that the consequences did not apply only to the Chinese economy, but also to the US. The offensive led by Donald Trump reduced the reputation of the United States, the involvement of which in the international community was no longer perceived as socially responsible. Customs duties imposed not only on China but also on other countries, including the EU, undermining the competences of the WTO, WHO and NATO's political cohesion, the anti-immigration policy, and withdrawing from COP21 arrangements affect negatively the global reputation of the US and the assessment of credibility of this country.

On this basis, it can be concluded that the confrontational style of conducting politics may also adversely affect the creator of this policy. Undermining the foundations proving the social responsibility of the state translates into weakening both the position of the attacker and the strength of the arguments used. Based on the observations of the US-China trade war, it can be concluded that it was associated with a mutual deterioration of reputation and trust in both sides of the conflict. The arguments used seem to bring more benefits to the US, although these may be apparent. It should be noted that with negative assessments of US actions global public opinion may begin to perceive China better. It is worth remembering that this is a long-term process and can be influenced by many factors. First, the victory of Joe Biden will probably improve the US reputation, which, even with the current policy of protecting US interests, will strengthen the formulated argumentation. Secondly, a Democratic representative's victory may translate into a less confrontational foreign policy. Thirdly, it should be noted that young people perceive China much better than the elderly, which may be related to, inter alia, an increasingly attractive offer that is competitive with the US and other Western countries' market propositions.

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VIII

Information, Welfare and Migrations – Practical Remarks in the Context of Economics of Information

(KATARZYNA ŚWIERCZYŃSKA)

Introduction

The outbreak of the COVID-19 pandemic made us aware of fragility of the order of social and economic relations in the local and global dimensions. The community split according to new patterns. The problem of the global pandemic has confirmed social, political and economic divisions, and additionally highlighted new ones. We re-weigh the good of the individual and the good of many; The results of scientific research regarding, for example, the effectiveness of personal protective equipment, are treated as plastic material, due to the large supply of information they become the object of faith, not knowledge. Information and disinformation coexist on a large scale, becoming a tool in the hands of various interest groups. By choosing the source of information, we become members of various factions, regardless of the home country and financial status. Some say this is a conspiracy, others ignore the problem; we have supporters and adversaries of lockdown; there is no agreement in terms of the fight against the crisis. The crisis caused by the pandemic is sometimes treated instrumentally, constituting a smoke screen for legislative changes concerning not only individual freedom, but also economic issues.

In view of the numerous (disturbing) events of the second decade of the 21st century, capitalism and liberalism (neoliberalism) began to be questioned and redefined (Collier, 2019).¹ Societies do not share common democratic and neoliberal values – more than half of the world's population lives in countries that are considered not fully democratic (Freedom House, 2020). We already know that Fukuyama was wrong about the end of the story, we ask why 'the story has not ended' (and how will it end?). High-income countries, despite the economic development achieved, continue to grapple with social inequalities that fuel the democratic crisis and populist movements with different ideological overtones. Polarization of views deepens within and between national groups; it

¹ Fragments of this text have been published in Polish in Świerczyńska (2020).

is reflected in the rise of social movements and protests such as Yellow Vests in France, Black Live Matters in the US, or recent socio-political protests related with Constitutional Tribunal ruling on abortion in Poland.

Domination of the Western hemisphere in political and trade relations has been shaken, especially in favor of economic power of East Asia.² Information provided and disseminated by transnational corporations (Google, Facebook), media giants, NGOs and even individuals such as Elon Musk, Bill Gates or Malala Yousafzai twitting their views has an impact on the way societies perceive reality. This may have not yet change the world, but it becomes a universal source of data accessible from anywhere (unless censorship is present) for everyone. Widened access to information becomes a factor for economic policy in low – and middle-income countries and it is vital to analyze these mechanisms to understand social and economic phenomena.

In this context, the aim of this text was to diagnose the level of welfare and access to information in the context of population migration, taking as the main research subject the countries of sub-Saharan Africa.³ These phenomena become an exceptionally interesting point of consideration from the perspective of the information economics, and in particular – the concept of information asymmetry in global social and economic processes (cf. Deszczyński, 2017; Stiglitz, 2017). Addressing this issue is justified in a historical, geographic, geopolitical, humanitarian and purely practical context. It belongs to the scope of information economics research in the field of analysis of the impact of information on the economy and economic decisions of entities on the mega-economic level (cf. Deszczyński, 2017). The reflection was exemplified with data from the years 1996–2019, which was dictated by their availability in relation to the analyzed variables. A comparative analysis was used as the basic research method.

² The dichotomy of the North-South relations, developed and developing countries, which was the axis of considerations of development economics in the second half of the 20th century and at the beginning of the 21st century, is now losing its substantive importance in the face of the growing importance of East Asian countries, but also – more broadly – of the BRICS group and other countries with characteristics more and more similar to them (Świerczyńska, 2019). The models of cooperation that dominated the polarization of international relations between the United States and the Soviet Union influenced the duality of the international system, which has been replaced today thanks to the alternative offered within the framework of the idea of South-South cooperation and the influence of countries such as China, Brazil or India on the economies of countries with low incomes, including the sub-Saharan countries (cf. Myrdal, 2002; Deszczyński, 2015; Fiedor, 2011).

³ Sub-Saharan countries are located south of the Sahara Desert, to the Cape of Good Hope.

8.1. Differentiation in a level of prosperity as a cause of migration

In low – and middle-income countries in sub-Saharan Africa and South Asia, poverty has not been resolved. Despite the fact that the level of prosperity in the world today is higher than at any time in history – and this can be said, in principle, for all continents – we still face the problem of poverty. As a civilization, we raised the average quality of life, but the poverty issue has not been resolved. Moreover, in the process, we used up enormous resources, produced waste and disrupted the ecological balance. Future generations will pay high price for modern economic policy. The perspective of climate change and rising aridity raises the question, who will carry the burden of decreased resources base: will it be the rich, or will it be the poor? Not only current situation but also the future perspective have an impact on the direction of population movements.

When it comes to poverty, the simplest measure, although controversial in the light of several decades of economists' reflections on socio-economic life, is GDP per capita (Calderón, 2009).⁴ The imperfection of this measure has been emphasized many times in the literature – it has been described as simplifying complex social phenomena (Fiedor, Kociszewski, 2011). GDP per capita is a measure of growth and does not directly mention the level of welfare or quality of life of the population. Economic development, on the other hand, is a concept encompassing qualitative factors and is so complex that, so far, there is no adopted measure that would allow its estimation.⁵ For example, A. Sen points out that economic development is connected with the possibility of making free choices regarding the conditions of human existence (Sen, 2002).⁶

⁴ GDP per capita is a measure that is most often used in the comparative analysis of groups of countries (cf. Calderón, 2009). Its value is unreliable, e.g. in countries affected by the problem of unequal income distribution, such as Equatorial Guinea (cf. Basu, Stiglitz, 2016).

⁵ Other measures are indicated in the literature and in databases of international organizations, e.g. the Human Development Index developed by the United Nations, which takes into account the level of education and life expectancy, i.e. the element of education and health care. The research also includes other indicators that approximate the level of economic development, such as: GPI – genuine progress indicator, ISEW – Index of Sustainable Economic Welfare, and others. However, so far none of the complex measures of development has replaced GDP and GDP per capita in comparative studies. This is due to the availability and universality required for databases and the lack of wide recognition.

⁶ Living in poverty is very often related to the fact that people are deprived of the possibility of making choices. As a result of the consequences of the crisis in the 1970s, economists – of which the most frequently referred to nowadays G. Myrdal – began to point out that development should be associated with the improvement of the living conditions of society, solving problems of social inequalities and satisfying the needs of the population. Currently, more and more frequently, people go even further and take into account the criteria related to environmental protection and management of natural resources, which leads to the concept of sustainable development, i.e.

At the same time, however, if we assume that the components of development are, for example, access to education and health care, to electricity, and nowadays – to mobile networks and the Internet, it cannot be forgotten that generally in countries where GDP per capita is higher these elements are often also better developed. This also applies to sub-Saharan countries, where the product per person is positively and statistically significantly correlated with all these factors (Tab. 1).

Tab. 1. Correlations of variables determining the qualitative and quantitative criteria related to economic development in the countries of sub-Saharan Africa in the years 1995–2017

GDP per capita (PPP 2011)	Access to electricity, % of population	Access to electricity, % of rural population	Access to the Internet, % of population	PWT Index	Variable name
1.0000	0.7122	0.5815	0.4094	0.6229	GDP per capita (PPP 2011)
	1.0000	0.8558	0.5441	0.5246	Access to electricity, % of population
		1.0000	0.5907	0.4732	Access to electricity, % of rural population
			1.0000	0.4654	Access to the Internet, % of population
				1.0000	PWT Index

Number of observations: 895.

Source: Świerczyńska, 2020.

Bearing in mind the above reservation, it should be stated that from the point of view of GDP per capita sup-Saharan Africa is the poorest geographical area in the world and this is basically consistent with the public opinion's idea of it (Andrzejczak, 2014). Moreover, poverty in sub-Saharan Africa has increased in relation to other groups of

one that allows meeting needs of current generation without depriving future generations of their ability to satisfy their needs (Ślodowa-Helpa, 2013). Although we know today that sustainable development requires exploitation of raw materials, investments, technologies and institutions that, while serving human aspirations, do not violate the ecological system, we allow the aggravation of problems and the occurrence of ecological disasters in the key ecosystems of the planet in the sphere of low-income countries.

countries over the past 30 years. The increase in GDP per capita in sub-Saharan Africa in the first decade of this century, mainly related to the demand for natural resources, meant that the relative income gap to the Eurozone did not grow, especially as high-income countries had to deal with the effects of the global financial crisis. However, in absolute terms, the difference between the per capita income in today's Eurozone countries and GDP per capita in sub-Saharan Africa is larger compared to the value of this difference in 1990, and is three times higher than the per capita income in sub-Saharan countries in 2018 (3527 PPP, *const* 2011, based on WDI, 2019).

Although very serious, social challenges in European countries are incomparable to those of the inhabitants of sub-Saharan Africa, per person on average, in terms of purchasing power parity. It is also worth mentioning that the per capita product in sub-Saharan Africa is five times lower than in the world's second 'poorest' region, South Asia.

To complete the considerations on welfare in sub-Saharan Africa, reference should also be made to the Human Development Index (HDI). The aggregated HDI value for individual countries takes into account income per capita and two qualitative criteria, including enrolment and life expectancy. It turns out that the results of the interregional comparison of HDI values are similar to those based on the GDP per capita measure. The level of prosperity of the sub-Saharan countries estimated by HDI is the lowest in the world. Among 30 countries with the lowest position of all 189 in the HDI ranking, only 3 are not from sub-Saharan Africa (UNDP, 2019).

Tab. 2. Positions in the HDI 2019 ranking and GDP per capita in 1995–2015 in USD *const.* 2010 for sub-Saharan African countries

HDI	GDP per capita					
	2019	M95-00	M01-05	M06-10	M11-15	Average
NAM	130	3670	4075	4978	5705	4563
BWA	100	4624	5230	6200	7136	5742
ZAF	114	5777	6368	7293	7578	6708
MWI	174	384	363	421	474	409
RWA	160	315	386	513	650	459
SWZ	138	2906	3166	3637	3934	3387
ZMB	146	928	1025	1301	1580	1195
CAF	188	420	414	435	370	411
LSO	165	850	931	1086	1305	1033
KEN	143	854	840	927	1050	914

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MOZ	181	228	309	391	473	345
COG	149	2375	2420	2570	2838	2542
GMB	172	505	531	533	534	525
GNB	175	605	518	531	556	555
UGA	159	391	452	559	638	504
BFA	182	397	463	542	614	499
CMR	153	1066	1163	1183	1260	1163
NGA	161	1268	1560	2141	2478	1834
BEN	158	659	722	754	800	730
ZWE	150	1293	1001	687	900	986
GAB	119	11212	9800	8858	9357	9874
TGO	167	526	483	482	520	504
MDG	164	419	407	430	408	416
AGO	148	2001	2080	3332	3662	2732
COD	175	332	272	305	360	318
CIV	162	1369	1247	1215	1307	1288
TCD	187	484	633	829	928	707
SEN	168	835	918	987	1015	934
GHA	138	930	1031	1212	1600	1180
BDI	185	240	225	228	236	232
TZA	163	476	559	664	780	613
NER	189	336	330	339	371	344
GIN	178	400	434	442	447	429
SLE	182	308	328	383	487	373
ETH	173	192	210	294	424	276
MLI	184	536	642	687	701	637
MRT	157	1020	1011	1224	1281	1128
LBR	175	245	322	312	366	308
SDN	170	940	1113	1411	1788	1295
GNQ	145	3325	11894	18329	16379	12046

Abbreviations: HDI – position in the HDI ranking, data for 189 countries in 2019; AGO – Angola, BDI – Burundi, BEN – Benin, BFA – Burkina Faso, BWA – Botswana, CAF – Central African Republic, CIV – Ivory Coast, CMR – Cameroon, COD – Democratic Republic of Congo, COG – Congo, ETH – Ethiopia, GAB – Gabon, GHA – Ghana, GIN – Guinea, GMB – Gambia, GNB – Guinea Bissau, GNQ – Equatorial Guinea, KEN – Kenya, LBR – Liberia, LSO – Lesotho, MDG – Madagascar, MLI – Mali, MOZ – Mozambique, MRT – Mauritania, MWI – Malawi, NAM – Namibia, NER – Niger, NGA – Nigeria, RWA – Rwanda, SDN – Sudan, SEN – Senegal, SLE – Sierra Leone, SWZ – Kingdom of Eswatini, TCD – Chad, TGO – Togo, TZA – Tanzania, UGA – Uganda, ZAF – South Africa, ZMB – Zambia, ZWE – Zimbabwe.

Source: own elaboration based on HDI data, ONZ, 2020 and Świerczyńska, 2019.

The highest ranked Botswana is on the 101st place in the United Nations economic development ranking (Tab. 2).

When considering the phenomenon of poverty as the cause of migration, it is impossible to ignore the problem of social inequalities. J.D. Wolfensohn (1997) stated that their elimination should be the main goal of development policy. According to many economists (including J. Stiglitz and J. Anyanwu), social inequalities are an autonomous barrier to economic development and as such are an important problem in economic research. In sub-Saharan African countries not only is the average living standard significantly lower than in Europe, but the level of social inequality is much higher. This applies to both countries with relatively high incomes (e.g. Equatorial Guinea, Namibia,⁷ Botswana, South Africa) and countries considered to be the poorest in the world (e.g. Malawi, Central African Republic) (Świerczyńska, 2019).

It is worth noting that, according to the results of research on migration from sub-Saharan countries to Europe in 2000–2015, some of these countries are too poor to generate emigration (Świerczyńska and Kliber, 2018). From the perspective of the sub-Saharan Africa this is especially true of agricultural countries. In one quarter of sub-Saharan countries more than 70% of rural population live below the poverty line, and only in four countries this applies to less than 40% of rural population (WDI, 2019).⁸ The greatest impoverishment occurs in countries with relatively high GDP per capita, i.e. South Africa, Equatorial Guinea and Zimbabwe, which emphasizes the problem of social inequalities in the region even more strongly.⁹

From the point of view of quality of life, the fundamental differences determining the disparities in prosperity between sub-Saharan Africa and the rest of the world include the level of infrastructure development. Nowadays, we consider the problem of the global warming (the climate crisis) and analyze the issue of the categorical need to change energy sources in countries such as Poland. Meanwhile, in Africa, an average of 45% of people still do not have access to electricity (WDI, 2019). Taking into

⁷ According to statistics, the country with the highest inequalities is Namibia. For some countries no data are available, although the scale of real social inequalities is even greater e.g. in Equatorial Guinea (cf. Chilosi, 2010).

⁸ The problem of poverty is also quantified with the use of a measure defining the share of the population with daily incomes below defined and revised (updated) thresholds, currently at PPP 1.90 (*const* 2011).

⁹ In South Africa, poverty has been reduced at the level of the total population, but the low incomes of people qualified as living in rural areas remain a problem.

account the challenge of electrifying Africa, we face the risk of increasing greenhouse gas emissions to ensure a basic right of access to electricity for half a billion people. Without the technological support of high-income countries, the Sub-Saharan countries may find it difficult to develop renewable energy sources. Even with this support, it is still a difficult task. Raising awareness of these realities is necessary to obtain a social consensus in order to launch support for the broadly understood infrastructural development of Africa. At the same time, openness towards students and employees from sub-Saharan countries may contribute to the positive impact of the diaspora on economic processes in the countries of origin. However, activating such mechanisms requires an inflow of information and an enrichment of knowledge that is lacking in high-income countries.

8.2. Information and communication technology access in sub-Saharan Africa

Taking into account the state of health care, problems related to infrastructure development and production structure, sub-Saharan region is considered technologically underdeveloped. The economies are called ‘developing’ or ‘laggard’. In a general sense, it is justified (manufactured goods account for about 20% of exports from sub-Saharan Africa, while the global average is about 70%, and only 4.42% of those goods are technologically advanced, according to World Bank data). However, the level of technological advancement is diversified in different countries of the region. Moreover, the information technology sector is a sort of exception, especially from the consumer perspective. Digital/mobile development in sub-Saharan African countries is dynamic and is specific to technological progress in other areas – the gap exists, but it is relatively smaller. According to data for 2018, 82 out of 100 people in the region have a mobile phone, which compared to the European Union (123 subscriptions per 100 people) gives a relatively good result. Growing number of subscriptions and increased penetration of mobile networks constitute the expansion of access to information and therefore build the capacity for absorption and creation of technologies.

There is growing literature on the analysis of the communication and information technology sector in Africa (e.g. Lehman, 2016). It suggests that the widespread use of

mobile phones and access to the Internet may be considered a factor in accelerating the technological development of the entire economy and increasing its productivity.¹⁰ Effective communication is one of the conditions required for spreading any other technology, knowledge and information, including business contacts, social contacts, and all other forms of knowledge transfer. Development of telecommunication technology and increased access to mobile devices and the Internet are therefore important factors for African development (Olalekan and Grobler, 2020).

Africa remains behind the global ICT trends in terms of penetration rates and the number of users, but at the same time it experiences highest growth rates. For investors, large population and low user base in Africa present a market of potential. For Africans on the other hand, spreading the ICT technologies is considered to increase the access to information of all kinds and to create an advantage in the context of information asymmetry (cf. Stiglitz, 2017). The countries of the region benefit from infrastructure investments made by transnational corporations from high-income countries and, to an increasing extent, China. The value of Chinese investments exceeded USD 1 billion in 2015 (ICA, 2020). In some countries, e.g. the Republic of Congo, deregulation of telecommunications markets contributed to development and expansion of these networks (cf. Bollou i Ngwenyama, 2008).

Young population of Africa expands with the median age below 20 years. For the expansion of the telecommunication market, this is a very promising characteristic. So is the increasing literacy rate among the youth. Regardless the fact that African market is still the least developed, especially due to poor telecom infrastructure, computer literacy and high costs of services compared to average wages (Świerczyńska, 2019). The first decade of 21st century was marked with acceleration of consumer ICT access. In sub-Saharan Africa, the rise of Internet users over 2005–2010 was 428.7%, the largest regional increase (Euromonitor, 2011). With the benefits of getting online people gained access to information regardless of their location and obtained a technological tool that transforms their daily lives (Leet al. 2012; Yelapaala et al. 2012; Capurro 2008).

¹⁰ Research by Wamboye (2016), conducted on a sample of 43 countries in the region, showed that ICT development, measured by the number of subscriptions to both landline and mobile phones, contributes to increasing the efficiency of labor resources. In earlier studies, Bollou and Ngwenyam (2008) formulated their conclusions more cautiously, claiming that despite the growth in the sector, its productivity does not increase and it is difficult to assess whether its impact on the economy is favorable.

Mobile and Internet revolution has not transformed the economies in Africa yet, but certainly has revolutionized information access for African societies. It has opened a new way of solving local issues, with a lot of community-oriented innovations using smartphones and applications to overcome, in particular, the infrastructure problems (cf. Świerczyńska, 2019; Eberhardt and Teal, 2012). In countries such as Kenya or Nigeria not only mobile payments but also mining cryptocurrencies and e-services are advanced (as of October 2020, the bitcoin trade volume in KES is six times the volume in PLN according to Local bitcoin data). Despite the fact that the ICT technology is not an export good for the region, it is applied to transform local lifestyles and businesses (Tab. 3, cf. Świerczyńska, 2019). Mobile phones use can be beneficial for the small entrepreneurs operating businesses and also for communicating with authorities (Euromonitor, 2010a).

Tab. 3. ICT sector data for sub-Saharan Africa in 1996–2018

Sub-Saharan Africa	1996	2006	2014	2015	2016	2017	2018
ICT goods exports (% of total goods export)	..	0,73	0,74	0,40	0,42
ICT goods imports (% total goods import)	..	7,09	5,12	6,12	5,64	4,96	5,04
ICT service exports (% of service export, BoP)	..	4,58	6,19	4,81	4,95	4,36	..
Individuals using the Internet (% of population)	0,07	2,71	15,06	20,75	19,38	18,71	..
Secure Internet servers (per 1 million people)	15,56	19,01	68,63	577,90	735,31
Mobile cellular subscriptions (per 100 people)	0,18	17,69	70,28	75,54	73,58	72,87	82,40
Mobile cellular subscriptions (millions)	1,08	135,23	680,98	752,00	752,40	765,23	770,57

Source: own elaboration based on World Development Indicators, 2020.

Analysis of the available data on the account ownership at a financial institution or with a mobile-money-service provider in different social groups reveals interesting phenomena. Between 2011 and 2017 (available data for this period) in the Kenyan society the use of the account nearly doubled, yet interestingly, for the poorest 40% it tripled, and for those with secondary education it reached 92% (more than the average for both Poland and the World). Moreover, in Kenya in 2017 76% of youth owned such accounts, which is more than the average in the World (56%), in Poland (63%) and in France (70%)

(Tab. 4). The results reveal that young generation in Africa is eager to adopt new remote technologies. Young generations in sub-Saharan Africa do not have the consumer habits of using e.g. banking services in person, and they tend to adopt new technologies and services available for them. Education and economic status seem to be an important diversifier for these countries (Tab. 4).

Still, the condition of education sector, poor quality of infrastructure, lack of schools and lack of qualified human capital in a number of African states undermine widespread use of the Internet. Moreover, state monopolies (e.g. Ethiopia) and instability due to security reasons (e.g. Somalia) may limit ICT technology absorption. Nevertheless, mobile phones surpassed fixed line phones in the region, because they are cheaper than PCs, easier to transport and store, and therefore more available. The prices of services are, however, high considering regional wages, so there is a demand for budgetary Internet providers. The wireless broadband infrastructure requires development, especially in rural areas. In this context, investments such as WACS (West Africa Cable System) based on optical fiber technology brings it closer and more available to the sub-Saharan Africa populations.

Tab. 4. The ownership of accounts at financial institutions or with a mobile-money-service providers in different social groups by regions and countries in the years 2011, 2014, 2017

Year	% of population aged 15+			Poorest 40% (% of population aged 15+)			Secondary education or higher (% of population aged 15+)			Young adults (% of population aged 15-24)		
	2011	2014	2017	2011	2014	2017	2011	2014	2017	2011	2014	2017
High income	88	93	94	85	90	90	92	95	95	74	82	82
Sub-Saharan Africa	23	34	43	13	24	32	38	51	60	17	26	37
World	51	62	69	41	55	61	66	73	79	37	47	56
OECD members	90	94	95	87	91	91	93	96	96	78	84	84
North America	89	94	94	80	89	87	91	95	95	78	88	88
Ethiopia	..	22	35	..	15	22	..	37	65	..	14	28
Germany	98	99	99	98	97	98	99	99	99	96	94	97
France	97	97	94	96	94	93	97	97	97	86	79	70
Denmark	100	100	100	100	100	100	100	100	100	99	100	100
Kenya	42	75	82	19	63	70	63	86	92	40	66	76
Poland	70	78	87	62	71	84	81	84	90	48	64	63

Source: own elaboration based on World Development Indicators, 2020.

Pantserev (2010) claimed that sub-Saharan Africa is not capable of integrating into the global information society yet, because they lack well thought-out strategies of the formation of information society, which would be fixed in official documents. This view was expressed a decade ago. Over that decade, the spread of information technology and the variety of its uses, from banking and mining cryptocurrencies to medical care applications, have increased, at least in regional hubs. Not all countries in Africa are as advanced as Kenya, yet the regional performance also indicates great progress (Tab. 4). It may be assumed that the telecommunication will be working in favor for other branches of economy and ease the transfer of further technologies.

Interestingly, in the high-income countries, perception of African societies is still biased by the lack of interest in the region and some of the stereotypes of the ‘hopeless continent’, concentration on poverty and conflict (Financial Times, 2019). It is true, as argued in the previous section, that the quality of live, the level of welfare and economic advancement are lower in the region, yet it should not be disregarded that it is not the only thing we should know about the region. African societies are young and eager to adopt new technologies, with an evidence of rising absorption of communication tools.

8.3. Emigration from sub-Saharan countries vs. the migration crisis

Researchers such as Akerlof (1970), Spence (1973) and Stiglitz (2017) have recognized the importance of information in the process of making economic decisions. Their research largely refers to the phenomenon of information asymmetry in the context of consumer and producer behavior in the goods and services markets. It is however, worth noticing that the conclusions drawn from this research become useful also for the analysis of processes within international economic relations. This is due to the fact that access to information is associated with gaining a comparative advantage at many different levels of economic relations (Deszczyński, 2017).

The impact of information on processes in sub-Saharan countries can be analyzed in the light of two important problems, the significance of which for the economic development of the countries of sub-Saharan Africa is emphasized in the literature (Rynarzewski et al., 2017; Świerczyńska, 2019). Firstly, it is about the phenomenon of migration, the directions of which are set, among others, on the basis of the acquired information resources (Świerczyńska and Kliber, 2018). Secondly, it is about the ability to attract for-

eign investments, highly beneficial for countries with low and medium income, which has been widely recognized in the literature (cf. Piasecki, 2007; Sitek, 2010). They are related to two important areas of knowledge: knowledge about external markets – the potential target of migration movements – and knowledge about the market receiving the investment, which is one of the basic factors of foreign direct investment (cf. Ławniczak et al., 2009; Leszczyński, 2019). This chapter focuses on diagnosis within the first of these areas.

Migration from countries with lower per capita income, e.g. African, to countries with higher per capita income, e.g. European, is a natural and – in the light of numerous pieces of evidence in economic history – inevitable phenomenon (Catles and Miller, 2011).¹¹ It has consequences for both the host country and the country of emigration. Voluntary or economic migration is often accompanied by obtaining a job offer or seeking potential job offers on terms more favorable than those available in the country of origin. In this sense, the key pull factors for immigrants include career development opportunities, level of social protection and standard of living (Świerczyńska and Kliber, 2018). Existing knowledge resources and access to information about the host country are nowadays key elements influencing directions of population movements. On the other hand, the low level of security, the occurrence of armed conflicts and poverty are key factors of the so-called push, influencing the decision to emigrate.

From the point of view of migration factors, the relative perception of living conditions in the country of origin and country of migration is crucial. People move to regions with more opportunities. In this case, significant information is provided by the comparison of the demographic characteristics of the studied populations (cf. Lipton, 2012; Lin, 2012). The countries of sub-Saharan Africa are characterized by the lowest average age and the highest birth rate so they have a relatively high potential of labor force (Tab. 5). Although employment in agriculture is higher than in other regions, urbanization processes are relatively quick there (despite the global trend of a slight slowdown in the growth of the urban population). Although the sub-Saharan region still falls behind other regions in terms of literacy of the population aged 15–24, there is progress (similar to South Asia), which in a longer term may be a factor in improving human capital.¹² These

¹¹ Poland has much experience in this field, starting with the Great Emigration of the 19th century and ending with the economic emigration to the UK after 2004.

¹² These conditions should translate into the development of the private sector and the middle class as well as an increase in consumer demand, making the sub-Saharan countries an attractive

factors make young people look for opportunities and personal development outside the country of origin.

Tab. 5. Characteristics of the population of selected regions* of the world (data for 2015 and 2019 – row below)

Data for the countries in the group*:	WLD	SSF	MEA	SAS	EAS	EUU	LCN	NAC
Population aged 0–14 (% of the total)	26,11	42,94	30,20	29,82	19,68	15,50	25,73	18,65
	25,65	42,28	29,85	28,01	19,64	15,13	24,20	18,27
Population growth	1,18	2,73	1,84	1,34	0,67	0,26	1,07	0,80
	1,07	2,66	1,74	1,18	0,54	0,16	0,93	0,57
Population in total (bln)	7,35	1	0,43	1,74	2,28	0,51	0,64	0,36
	7,67	1,11	0,46	1,84	2,34	0,45	0,65	0,37
Rural population (% of the total)	46	62	36	67	43	25	20	18
	44	59	34	66	40	25	19	18
Per cent increase of urban population	2,05	4,13	2,35	2,66	2,31	0,56	1,41	1,01
	1,89	4,03	2,21	2,49	1,96	0,45	1,24	0,80
Literacy (% of population aged 15–24)	91,03	74,40	90,77	86,96	98,60	..	98,31	..
	91,73	76,32	90,12	89,96	98,69	..	98,59	..

* The table shows aggregated data for the following country groupings, according to the World Bank methodology: WLD – average for all countries; SSF – sub-Saharan Africa; MEA – North Africa and the Middle East; SAS – South Asia; EAS – East Asia; EU – European Union; LCN – Latin America; NAC – North America.

Source: own elaboration based on World Development Indicators, 2020.

On the other hand, the region's problems still include issues of political instability, corruption and the authoritarian nature of political regimes; only Ghana, Botswana, Namibia and South Africa are considered to be full democracies (cf. Freedom House).

market for foreign investment. So far, however, this potential has been insufficiently used, and despite the expansion of the investment portfolio, especially to the financial and telecommunications services markets, many of them are still concentrated in the natural resource extraction sector (Świerczyńska, 2019).

In the case of taking undemocratic paths, authoritarian governments in lower-income countries or their radicalization, an increase in the influx of political refugees to countries with a stabilized political situation, where civil rights and liberties are guaranteed, can be expected (cf. Boeri and Brucker, 2005). This creates a peculiar paradox: political refugees seeking refuge from the immediate threat to their lives from illegal actions of the state are perceived as a threat to the host country's democracy. The negative sentiment on the part of the host society (often fueled by political discourse¹³) has emerged in the light of the influx of people from North and West Africa, as well as refugees from Syria over the past few years. At the same time, problems related to the sense of solidarity within the European Community and strong nationalist tendencies were highlighted. The phenomenon of migration in the context of these events and the political pressure on public opinion began to be called a crisis, which secondarily contributed to strengthening the stereotypical approach to the negative impact of immigration on economy and society.

In this context, from the point of view of the topics discussed in this chapter, the influence of mass media on people's behavior and the way they think is an important point of reference (McCombs and Shaw, 1972; Gerbner, et al., 1986; Carroll and McCombs, 2003; Trębecki and Rydzak, 2016). Interestingly, media reports and public debate basically disregard migration statistics. According to the data, the United States took in over 2 million immigrants each year in 2005–2015, while in 2017 – 1.1 million, i.e. less than Germany (1.4 million). In the same year Great Britain (520,000), Japan (475,000) and Turkey (466,300) took in over a million foreign citizens. The perception of immigration and attitude towards migrants are not related to their number, i.e. a negative attitude is not a consequence of an influx of people. It is worth noting that the acceptance level for immigrants is higher e.g. in the United States (76.4%), Germany (79.7%) and the UK (82.4%) than in Poland (38%), which accepts much fewer migrants (128 thousand).¹⁴ According to the United Nations statistics, global net migrations increased from 2.9% to 3.5% in 2019 compared to 1990, and when analyzing them, one should take into account legislative changes enabling movement of people, technological progress and lowering transport costs. In this sense, information that is widely available is not actually used by either side of the discourse that is based primarily on emotions but translates into actual election results. Flagship examples include the election of Donald Trump as the US president and Brexit.

¹³ On the subject of German civic education in combating right-wing extremism, cf. Janicka.

¹⁴ The data on opinions on migrants are from Gallup for 2016.

According to United Nations statistics, the value of total net migration is increasing faster than the birth rate. Moreover, the dynamics of the increase in the number of refugees in the last decade was higher than in the case of voluntary migration, which can be interpreted as a symptom of the generally poor condition of world democracy. Despite the prevalent views in Western societies, more and more refugees find their way to the countries of the South, and not to the countries of the rich North. According to data for 2017, 46% of refugees resided in the countries of North Africa and West Asia (UN, 2019). Thus, the burden of supporting refugees is on relatively poorer countries.

Even though most of the total migration goes to North America and Europe, the importance of migration in African and West Asian countries is growing three times faster (UN, 2019). Importantly, there are much fewer migrants from sub-Saharan countries than those born in Europe or Asia. Migration from Sub-Saharan Africa to Europe was not among the top five migration corridors (pairs of regions of origin and destination of migrants) according to the 2019 data. Importantly, there are much fewer migrants from sub-Saharan countries than those born in Europe or Asia. According to the 2019 data migration from sub-Saharan Africa to Europe was not among the top five migration corridors (pairs of regions of migrants' origin and destination). What is worth emphasizing, however, was that the intra-European was in the first place and the sub-Saharan corridor – in the fifth (UN, 2019). This means that still more people move between European countries, and even between sub-Saharan countries, and not between continents. The countries of Sub-Saharan Africa differ so much that while some of them generate negative migrations, others are characterized by a positive balance of population movement. In some countries, such as Gabon, Ivory Coast, Botswana and South Africa, the share of migration is as high as 10–20% of the population. Regional migration targets the largest economies in South and West Africa.

Regardless of this, there is no doubt that as the mass of total migration increases, the value of sub-Saharan migrations to Europe is also increasing. The extent to which this phenomenon can be called a crisis remains a questionable issue in the light of the semantics of the term 'crisis' (Rydzak, 2011). This term can, however, be referred to the social reaction related to these events. The key factor in these processes is the lack of knowledge of Western societies, which in this context include Poland, about the living conditions and social relations in the countries of origin of immigrants, or even political refugees (although this wave is usually accompanied by a more substantive information

campaign). The phenomenon of economic emigration is often confused with seeking asylum, and the color of immigrants' skin is related to their religion and views, which is very often unauthorized (e.g. taking into account that Christianity is one of the dominant religions in the countries south of the Sahara). Cultural, ethnic and religious differences are widely recognized as preventing the assimilation of immigrants, and considerations of the political economy, instead of focusing on the search for effective methods of managing population movements and allocating new resources in the economy, have focused on the need to enclose and stop migration. In this context, it is crucial to try to draw attention to the problems faced by the countries of sub-Saharan Africa and the threats to the whole world if these problems are not resolved.

In order to understand the causes of immigration, it is important to identify the key features of poverty in countries that contribute to the generation of the 'push factors'. Increasingly broader access to information and opportunities to learn and plan one's own future in more favorable social, political and economic conditions trigger the 'pull factors' known from experience to Europeans who migrated on a large scale to the United States with the promise of a better life, and Poles seeking employment in the UK and Germany after joining the European Union.

Conclusions

Democratization and decentralization of the supply of information about global influence, thanks to which teenage activists gain power of influence greater than that of heads of state, as well as the growing database of information that can be obtained on countries and governments, especially democracies, in the global network, are incomparable to the scale of information from several years ago (Golata et al., 2010). However, this phenomenon mainly affects countries with high income and broad civil liberties. Knowledge resources concerning the functioning of societies of South Africa, and sub-Saharan Africa in particular, are very narrow. In the social sphere, they are often based on a few items of literature and are of interest to a few. Likewise, the scope and reliability of low and middle income countries statistics and trade information in international databases remains limited. It is connected with the occurrence of a specific paradox.

In view of the dynamic development of ICT networks covering all continents (albeit to a different extent) and the growing importance of information in the economic

decision-making process, population of low-income countries in sub-Saharan Africa has relatively more information on high-income countries (North America, Europe) than in the opposite relation. In this sense, the concept of information asymmetry takes on a new meaning. Access to high-value information remains limited to entities with enough capital to obtain it. Nevertheless, from the point of view of 'low value' information, its supply is much higher in high-income countries, in this sense its value is lower and it becomes widely available. This phenomenon becomes both a context and a factor for social (e.g. cultural, political, behavioral) and economic (e.g. imitation, diffusion, catching up) phenomena in the dynamically changing conditions of the world economy.

The processes expected from the point of view of the development of sub-Saharan African countries are progressing too slowly, especially in the context of prosperity and technological progress contributing to a better quality of life in other regions of the world. At the same time, access to the media, especially the Internet, increases awareness of the disproportions among the inhabitants of the region. Even though sub-Saharan countries seek opportunities for economic growth, their people choose to migrate to improve their livelihoods. At the same time, there is a crisis of values in high-income countries, as well as polarization and radicalization of political views. Against the background of these two generically different (and simplified) levels of social problems and the divergent interests of poor and rich societies, information is a source of gaining comparative advantage and making effective economic decisions. Unfortunately, contemporary socio-technological conditions also open the way for information activities carried out within the framework of particular interests, which may contribute to the intensification of destructive social conflicts. Hence the possibility of manipulating information related to migration movements, spreading defensive attitudes and causing social conflicts before their outline even has time to materialize.

Thinking about a country, society or group of countries requires taking into consideration the global context. Mega-processes, such as global warming (the climate crisis) or migratory movements, take place whether or not they are desired. It is in their context that is worth noting that, in fact, the interests of the population may be common. Fighting to maintain inequality to protect one's own interests and indifference to the poverty of other countries in the light of historical experience can lead to aggression and conflict. Countries of the West remain the archetype of prosperity (luxury). Nevertheless, accepting Western (European) values is a separate issue today. It is thus practically justified for

the European countries to concentrate on using information to build social cohesion, create mechanisms of assimilation, and therefore strengthen the fundamental values of their culture instead of waging an ideological war. Otherwise, the Western civilization may contribute to its own decline.

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