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Marcin Kowalczyk PhD

Department of Legal Protection of the State

Faculty of Law and Administration

University of Warmia and Mazury in Olsztyn

The summary of professional and academic accomplishments

- 1. Full name:** Marcin Kowalczyk
- 2. Diplomas, academic/artistic degrees with the. name, place and year of accomplishment, and the title of doctorate paper:**

23rd January 2008 — doctoral degree in humanities in the field of political science assigned by the resolution of the Council of the Faculty of Journalism and Political Science at the University of Warsaw of the 6th July 2011. The title of the doctorate paper: *Public information in the civil society – concepts and experiences* (supervisor: prof. Jerzy Olędzki, reviewers: prof. Janusz Adamowski, prof. Beata Ociepka);

2003 – master degree; major: journalism and social communication (track: media marketing and public relations), the Institute of Journalism, Faculty of Journalism and Political Sciences at the University of Warsaw, master thesis entitled: *EU Accession referendum campaign in Poland. Comparative analysis* (supervisor: Włodzimierz Głodowski PhD);

2002 – master degree; major: cultural studies (track: American politics), American Studies Center at the University of Warsaw, master thesis entitled *U.S. – Soviet Relations During Reagan Presidency (1981-89)* (supervisor: Zbigniew Kwiecień PhD);

2001 – master degree; major: international political relations, Warsaw School of Economics, master thesis entitled *First decade. Political and social transformation in Poland from 1989 to 1999* (supervisor: prof. Piotr Ostaszewski)

Other diplomas:

2002 – National Security Studies diploma, the Institute of International Relations, Faculty of Journalism and Political Sciences at the University of Warsaw, National Security Bureau, Ministry of National Defence of Republic of Poland;

2001 – *Improving the effectiveness of didactics* course diploma, The Centre for Open Education, Warsaw School of Economics;

1995-96 – double High School diploma obtained from: Moore High School, Moore, Oklahoma, USA, Polish High School diploma obtained from III High School in Olsztyn.

3. Information on employment in academic/artistic units

- a) since June 2008 – adjunct in Faculty of Law and Administration at the University of Warmia and Mazury in Olsztyn;
- b) November 2007 – May 2008 – junior lecturer in Faculty of Law and Administration at the University of Warmia and Mazury in Olsztyn.

4. Specification of the achievement according to the Article 16 (2) of the 14 March 2003 Act on academic degrees and academic title, and degrees and title regarding art (Journal of Laws 2016 No 65 position 595 with changes):

- a) The achievement entitled:

Scientific monograph: *Digital State. Determinants and perspectives*

- b) Author, Title, Publication date, Publisher, Reviewers

Marcin Kowalczyk, *Cyfrowe Państwo. Uwarunkowania i perspektywy [Digital State. Determinants and perspectives]*, Wydawnictwo Naukowe PWN, Warsaw, 2019.

Reviewers: dr hab. Anna Jupowicz-Ginalska, prof. nadzw. dr hab. Sławomir Gawroński

c) Description of the scientific objective and results achieved, including their potential implementation

The leading theme of the achievement: book entitled *Digital State. Determinants and perspectives* is an attempt to present the comprehensive idea of a modern Digital State¹. The choice of this subject results from the author's personal scientific interests, based on the research of the phenomena related to the digital transformation of public institutions. However, these research interests are not limited to the public sphere, since social impact of very dynamic technological changes has also been taken under consideration. The author assumes, that in his attempt to distinguish the transformative processes regarding institutional, process and organizational dimension, wide spectrum of transformations in relation to people should also be accentuated. This book puts emphasis on the role of people in relation to the processes of modernization of public institutions. Thus, it should thematically fit into the scientific field of digital humanities, that is an interdisciplinary view on the subject of technological change, including considerations of: media science, political science, sociology, social psychology, economics, management, security studies and administration science. It should be assumed that the subject of research will regard not only transformative processes taking place in institutions, but social changes related to technological progress. The interdisciplinary approach to the above subject is supported by the author's academic curriculum and previous research works conducted in the following fields: economics, international relations, social communication, cultural anthropology and security studies. In the author's personal view, in-depth studies on the directions of modern technological progress require focusing on various disciplinary themes, thus constituting the interdisciplinary character of the considerations included in this book.

The research objective of the book *Digital State. Determinants and perspectives*, is an attempt to analyze the idea of a modern Digital State. Apart from aspects related to changes in the public sphere, including: *Open Government*, *Big Data*, *crowdsourcing*, use of artificial intelligence, in the book I have also taken into account the social impact of dynamic technological changes taking place in the 21st century. In addition to indicating the characteristics of institutional, process and organizational transformations, etc., I have also

¹ The book implements concept introduced by dr hab. Andrzej Sobczak, according to which Digital State is the end result of Digital Transformation. It is a distinctive form of organizational change taking place in public sector in specific time frame, with the main goal of transforming public sector, which would result in better future performance; A. Sobczak, *Cyfrowa Transformacja Państwa*, Ośrodek Studiów nad Cyfrowym Państwem, <http://www.cyfrowepanstwo.pl/wizja-cyfrowego-panstwa/cyfrowa-transformacja-organizacji-publicznych/>, access date: 12.04.2019.

emphasized how modern technologies relate to people who are beneficiaries of modernization processes of public institutions. Another important research goal involved attempt to indicate potential forecasts for the development of the Digital State (which in the title of the monograph have been defined as "perspectives") over the next several years, based on the research of the latest studies and reports prepared at the request of the World Economic Forum, taking into account technological changes. related to the development of *Blockchain* technology, Big Data refinement, the development of the *Internet of Things* and the possibilities of implementing the above categories in the activities of the public sector.

As a justification for the research topic I have undertaken, it can also be pointed out that technological progress, taking place at an exponential rate, goes beyond the scope of human experience. This progress, not going hand in hand with the individual's cognitive abilities, creates a cognitive gap. Therefore, the undertaken research was intended to:

- attempt to systematize knowledge in the field of modern progress in digitization; the monograph presents a very up-to-date state of developments - it was written on the basis of the most recent data possible (recent footnotes date from the turn of 2018/19, some of the data comes from previous years, mainly 2017-18). The book includes a detailed analysis of the latest technological trends related to the digital transformation of the state, including: *Blockchain* technology development, development of artificial intelligence, *Big Data* refinement potential, increasing importance of *crowdsourcing* in the process of improvement of the decision making, as well as functioning of the *Open Government* model. The study also included topics related to cybersecurity and analysis of contemporary threats related to the public sphere (cybercrime, cyberterrorism, cyberwar). As of today, concepts of: *FinTech*, artificial intelligence and machine learning, automation and robotization, the concept of robonomics and alternative payment systems should be of equal importance.
- indication of technological trends, defining the most important vectors for the development of the Digital State in the next decade, in comparison with earlier trends related to e.g. the development of new media and the issues related to modernization (including increasing the importance of autonomous, self-learning artificial intelligence systems and related to the automation of changes in the labor market; development of the Internet 5G - *Internet of Things*; greater use of *Big Data* potential, including refinement of users' data, searching for alternative ways of settling public and commercial organizations using the *Blockchain* mechanism, popularizing cooperation models based on e.g. the crowdsourcing concept, implementing the idea

of a pocket-sized, mobile "supercomputer" with virtually unlimited memory capacity, which is increasingly applicable in e-services, e-banking or e-medicine).

An important objective of the book is the attempt to provide a reply to the following problem: *How, in view of human beings, will public institutions evolve over the next decade?* It should be assumed, that the attempt to make predictions in the dynamic, fluid reality may yield potential error, based on referring to earlier events and relying on acquired cognitive experience. The author is rather inclined to make an attempt to indicate some of the most important trends, rather than to present a declarative statement of an "objective" foresight of the Digital State. Technological processes that take into account great advances in the fields of: genetic engineering, cyborg engineering, effect of implementation of advanced artificial intelligence on the public institutions, or very strong emphasis on the processing of massive amounts of data, they all may radically transform the contemporary world in the nearest future. The new technologies should not only trigger the change in institutions, but above all, they will affect people: their cognitive abilities and identity, which can be subject to the far-reaching technological modification.

The books published so far reflect on selected areas of technological changes (eg *Blockchain, Big Data* refinement, *Internet of Things*), however (with few exceptions²) they do not offer a comprehensive view on the development of public institutions in the second decade of the 21st century, interweaving the vision of the development of all the above-mentioned technological aspects. In addition, in the book I pointed out potential scenarios for the development of new technologies, which could be implemented by public institutions in the next decade (based e.g., on the latest studies and reports commissioned by the World Economic Forum), which is its additional goal of this publication related to indication of new directions of technological progress. The main research problem contained in the book refers to the determination of the impact of dynamic technological changes on the functioning of public institutions within the modern Digital State (interchangeably referred to in the book as e-Gov 3.0) and potential directions of evolution of the Digital State, according to e.g. the concept of "Black Swan Theory"³. These directions of the evolution of the Digital State were

² One of such comprehensive books is entitled A. Adegboyega, J. Millard (red.), *Government 3.0 – Next Generation Government Technology Infrastructure and Services Roadmaps, Enabling Technologies & Challenges*, Springer International Publishing AG, Switzerland, 2017. However, it is not written by one author, but rather it includes articles by selected researchers dealing with the digital transformation of public institutions.

³ Concept formulated by Nassim Nicholas Taleb in his book entitled: *The Black Swan; The impact of the highly improbable*, Random House, New York, 2007. "Black Swan symbolizes a highly improbable event with three principal characteristics: It is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was". According to Taleb, the astonishing success of Google was a *Black Swan*; so were 9/11 terrorist attacks.

taken into account in the concluding part, entitled *In search of Black Swans*, grouped in four scenarios: *The e-Agora State (Democratic Technopolis)*, *The Techno-Corporate State*, *The Cybernetic State* and *The "Big Brother" State*.

Presentation of the topics and publication structure

The study included a detailed research analysis of the latest trends regarding technological innovations, based on research literature, reports and statistics released from 2014 to 2019. These trends include:

- the impact of new media and mobile technologies on the development of the e-services architecture;
- the intersection of of state and commercial organizations while creating the basis of corporate architecture (ICT systems) of public entities in the cooperation with the e-banking sector and *FinTech* institutions;
- indication of new models of the individual participation in the public sphere, including *crowdsourcing* and *User-Generated Content* in the Web 2.0 environment;
- the growing importance of Artificial Intelligence (AI) systems in the process of modernizing public and commercial organizations;
- issues related to *open government* implementation, as well as discussion on the strategy related to diminishing digital exclusion.

The book consist of eight parts (introduction, six chapters, and conclusion). The first part of the book entitled *Introduction to the Digital State* provides some information on the subject and purpose of the study, the structure of the book, principal problems, assumptions and research hypotheses, the research methods along with their justification and terminological assumptions. This part also provides definitions of *e-Government* and *m-Government* – the essential issues to be discussed in the subsequent chapters.

The first chapter entitled *Technological environment* comprises the main theoretical assumptions concerning *Information and Communication Technologies (ICT)* and *New Media* – the technological environment within which the transformation processes of public institutions take place. It is followed by an overview of the most important theories of new media alongside their etymology: from the initial stages of conceptual work related to the development of the internet in the 1960s and the evolution of the *www*, from early forms,

through Web 2.0, to mobile technologies. The chapter is concluded by the issues related to the *User-Generated Content (UGC)*.

The second chapter entitled *Network society* contains the etymology and review of information society theories, evolving from its beginnings, through the stage of industrial society, technopoly, post-industrial society, towards the *Global Village* – according to Marshall McLuhan. The following parts of the chapter include considerations related to the post-industrial society according to Daniel Bell, *The Age of Discontinuity* by Peter F. Drucker, *The Third Wave* according to Alvin Toffler, and *The Rise of The Network Society* and *Networks of Outrage and Hope*, by Manuel Castells. The subsequent part of the chapter contains considerations related to *The End of History And The Last Man* and *Our Posthuman Future*, according to Francis Fukuyama, as well as other theories: *Transhumanism*, *Posthumanism*, *Data-ism* – especially provocative in recent years due to the very large pace of technological transformations. some considerations on *Digital Divide* were included in the concluding part of the chapter.

The third chapter entitled *Modernization of the State – dimensions of the digital transformation* presents some considerations regarding the definitions, etymology, and evolution of the three areas of digital transformation identified by the author: *Big Data* refining mechanism, the *Open Government* model, and the application of *Artificial Intelligence* – AI (including the following sub-disciplines: *Machine Learning (ML)*, *Supervised Learning*, *Reinforcement Learning*, *Unsupervised Learning*, and *Transfer Learning*).

The fourth chapter entitled *Blockchain – network of distributed trust* presents the characteristics of secure payment systems based on the concept of strong cryptography, as an important area of digital transformation. It also presents the evolution of *Blockchain* technology and characterizes the transaction mechanism, with cryptocurrencies serving as an instance. This chapter also contains considerations regarding the trust and its role in the functioning of modern states in relation to the developments leading to the financial crisis of 2008. The final part of the chapter presents a case study – the collapse of the *Lehman Brothers* investment bank, and its consequences for global trust indicators. The above mentioned development is still relevant, even though more than a decade has passed since *Lehman Brothers* demise.

The fifth chapter, entitled *Digital State (e-Gov 3.0)*, presents the concept of e-Gov 3.0, along with examples of implementations, preceded by the definitions of the State institutions and the Cybernetic State. The chapter also presents a research analysis used to formulate

comparative measures for the development of the Digital State, including indicators derived from reports and statistics (published by the OECD, the World Bank, Eurostat, Eurobarometer, etc.), including fundamental measures of the effects of digitization (including the *Open Data index*), related to macroeconomic indicators (including data on *per capita GDP*, *GDP*, and other related indicators included in the study). The study is followed by a commentary, taking into account the interpretation of individual country results, as well as potential causal relationships, taking into account comments and potential best practice patterns, that could be implemented in Poland. Issues related to cyber security in the era of swift technological progress were discussed in the following part of the chapter, with practical examples of the most important threats, including *Cybercrime*, *Cyberterrorism*, a relatively new category of *Cyberwar*, alternatively referred to as the *Information War*, as well as potential threats resulting from the modern technological developments, taking into account surveillance or undesirable forms of violation of the privacy of ICT users. The last part of the chapter presents a case study referring to the activities of *Cambridge Analytica* (CA) consultants, providing their services to supporters of UK Leave in the Brexit referendum. CA, by using algorithms based on the social media activities of individual British citizens, managed to create personalized persuasive messages used in the campaign. The same methods were implemented by CA in the presidential election campaign in the United States throughout 2015–2016 period .

The last chapter entitled *In search of Black Swans* includes potential future trends regarding the development of the Digital State. This part of the book focuses on the potential impact of the further development of mobile technologies, which strongly dominated the last decade. In addition, the author also presents forecasts regarding the development of cooperation between public institutions and the commercial sector in the creation of corporate architecture of modern transaction systems, increasing importance of bottom-up initiatives in the network environment, new payment methods enabled by the *Blockchain* mechanism, *5G* (*The Internet of Things*) environment development, and the developments related to Artificial Intelligence, as well as the process of refinement of vast amounts of data resources (*Big Data*), that could streamline decision-making processes. The last part of the chapter contains forecasts concerning the future of the Digital State, grouped into four scenarios: *The e-Agora* (also called *Democratic Technopolis*) *Digital State* scenario, *The Techno-Corporate Digital State* scenario, *The Cybernetic Digital State* scenario and *The “Big Brother” Digital State* scenario.

In the concluding part of the book the author verified the research hypotheses, and pointed out the most important concluding remarks, as well as potential issues for future, in-depth research work. The author's personal reflections were also included in the conclusion.

Problems, hypotheses, methodology of research

The first research problem raised in the study refers to the determination of crucial conditions, which must be met to conduct the process of digital transformation of the State, assuming that this process could not take place only within public institutions, but should take into account best practice patterns from the commercial institutions - developing personalized solutions, attractive to use for end users. An important feature of this solution may be the inclusion of a very advanced research and development (R&D) potential of commercial institutions. With regard to these conditions of the process of the digital transformation of the State, I have distinguished the following research hypothesis:

The development of the Digital State requires cooperation with specialized commercial institutions, eg from the FinTech sector, with best practice models of implementation strategies, an advanced research and development (R&D) as well as a strong specialist and expert potential.

The second very important research problem included in the study refers to the indication of rational justification of activities related to the digital transformation of the State, by indicating the most important effects of this development, including macroeconomic indicators in the form of data on GDP/GNP growth, *per capita* GDP/GDP indicators, or equally important *Open Data* indicators referring to increasing access to data and information and knowledge generated on the basis of this data. In addition, it is equally important to determine the impact of digital transformation on broadly understood innovation. With regard to the above-mentioned research problem, I have formulated the following research hypothesis:

Important effects of digitization include: high rate of economic growth, resulting from a more complete market potential of the Open Data and high innovation rates, which result from cooperation between public and commercial institutions, as well as an adequate level of funding for research and development.

Another research problem included in the monograph concerns the impact of technological progress on increasing social stratification, with regard to the level of (or lack of) skills useful in the professional environment and in social life. Therefore, it is important to try to determine to what extent technological progress can contribute to the creation of a new social division with two groups: people adapted to function in a dynamically changing digital

environment and the digitally excluded ones, creating a potentially impoverished group of former employees, being left behind the automated labor market. With regard to the above-mentioned research problem, I formulated the following research hypothesis:

One of the most important challenges in the development of the Digital State is the need to deal with the problem of digital exclusion, which should be treated analogically to the problem of economic exclusion within any society, creating strong disparities in economic and social development of individual countries.

The last research problem presented in the book concerns the assessment of the scope of threats and their impact on the Digital State. In contrast to traditionally understood conventional safety – understood as territorial security, that means protection against external invasion and homeland security and protection against the threat of terrorist attacks, cyber security takes into account a new type of threats, related to activities performed by cybercriminals (who may effectively steal data from clients of financial institutions), and cyberterrorists, whose actions may contribute to crippling the critical infrastructure of the Digital State. With regard to the above-mentioned research problem, I formulated the following research hypothesis:

A particularly important challenge in the development of the Digital State is to ensure an appropriate level of ICT security (cybersecurity) in line with conventional operations, understood as ensuring territorial security and protection against conventional military and terrorist threats.

The complex, fluctuating research area related to the Digital State, requires conducting research with the holistic approach, since I have analyzed both the quantitative features (presented in the elaboration in the form of shared statistics) and qualitative ones. Due to the issues related to the effects of human actions, i.e. social phenomena (as it should be related perceived information transformation processes), which is difficult to quantify through the presentation in the form of patterns, I have applied a systemic approach⁴. I would like to point out that the reasons and effects presented in the study, referring to individual conceptual categories, combine feedback mechanisms and multilateral relationships. Therefore, they cannot be represented by short causal chains, in which case the implicit thinking mechanism becomes necessary. Individual elements subjected to the analysis should be analyzed in relation to their environment. In conducting the research analysis, I also took into account

⁴ M. Sławińska, H. Witczak (red.), *Podstawy metodologiczne prac doktorskich w naukach ekonomicznych [Methodology basics for doctor al dissertations in economic science]*, Polskie Wydawnictwo Ekonomiczne, Warszawa, 2008, p. 11–13.

elements of a situational approach⁵, the important element of which is not so much the formulation of universal laws and theories as the interpretations of phenomena that may be subjected to further revision and discussion in the following years. In the selection of research tools and techniques, I would also like to point out that in relation to the subject presented in the study I was forced to apply various approaches, techniques and research tools, including the use of the achievements of many scientific disciplines. Below I present the research methods applied in the work, taking into account:

- Analysis of documents in the form of reports and statistics, prepared by Organization for Economic Co-operation and Development (OECD), World Economic Forum, World Bank, Eurostat, as well as Eurobarometer surveys, on the basis of which I created comparative summaries of selected indicators of the development of the Digital State, including fundamental measures of the effects of digitization (including *The Open Data Index*), in relation to macroeconomic indicators (data on GDP *per capita*, GDP and other related measures included in the study).
- Selected case studies; I implemented this method in order to: indicate selected models of state modernization based on the analysis of the best implementation practices in individual countries, the use of *Big Data* refinement by political consultants during the referendum campaign concerning the exit of Great Britain from the European Union⁶ and during the presidential elections in the United States in 2016, the result of which is the election of Donald Trump and the numerous controversies regarding the potential use of algorithms analyzing the preferences of potential voters using social media, as well as those that may affect electoral decisions of voting parts. In the monograph I also included a case study referring to the collapse of the Lehman Brothers investment bank in 2008 and the impact of this event on confidence indicators. Both events mentioned above refer to the phenomena defining the contemporary development of technology in relation to the public sphere and the creation of structures of the Digital State. The collapse of Lehman Brothers combined with the erosion of trust in public institutions, mainstream media, business and non-governmental organizations has created space for alternative forms of communication in cyberspace, with the potential to engage a large group of Internet users and influence important political processes in recent years. The activity of *Cambridge Analytica* and the influence of data science specialists on modern election processes (including the Brexit referendum, the last

⁵ *Ibidem*, p. 13-14.

⁶ Another name employed for this process in the book: *Brexit*

presidential election in the United States) can be treated as a logical consequence of the phenomena that began with the fall of Lehman Brothers. The considerations contained in the analyzed cases were based on available materials from newspaper articles, reports, websites, shared media and the own media of researched organizations.

In my work, I have also distinguished examples of events from related fields, including, challenges for the cyber security system related to the threat of *Blackout* - the shutdown of ICT systems or the loss of power, as well as the analysis of the progress in the field of automation, which are important in the functioning of particular social and professional groups. In addition, in the last part of the study, entitled *In search of Black Swans*, I presented a few examples of implementations in the field of genetic engineering, nanotechnology and cyborg engineering, involving the construction of entities combining organic and synthetic elements (ie having artificial limbs, implants put into internal organs, etc.), as phenomena that have a decisive influence on the perception not of institutions functioning within the Digital State, but rather redefinition of the role of modern society and the individual in interaction with new technologies and the social impact of exponential pace of technological progress.

Applicability of the study

The results of the research included in the scientific achievements have been presented at international and national scientific conferences, among which should be included:

- National conference *Logistyka i Zarządzanie w Mediach. Media Regionalne, Nowe Media, Monetyzacja*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 20-21th October, 2016, Paper entitled: *Crowdsourcing w mediach elektronicznych – analiza zjawiska [Crowdsourcing in electronic media – analysis of the phenomena]*;
- National conference *Memy czyli życie społeczne w czasach kultury obrazu*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 17-18th November, 2016, Paper entitled: *Charakterystyka e-usług zorientowanych na użytkownika – analiza wybranych zastosowań eGov 2.0 [Characteristics of user-centric e-services – an analysis of selected eGov 2.0 implementations]*;
- National conference *Działalność Organizacji Pozarządowych: Organizacje pozarządowe w ujęciu prawno-postulatywnym*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 25-26th November 2016, Paper entitled: *Nowoczesne technologie informacyjno-komunikacyjne (ICT) –*

Wykorzystanie w promocji aktywności obywatelskiej na forum publicznym [Modern ICT – implementation in promoting civil engagement in public pshere];

- National conference *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw, 7th December 2016, Paper entitled: *Współpraca administracji publicznej i organizacji komercyjnych – analiza wdrożenia Profilu Zaufanego w systemie iPKO [Cooperation between the public administration and commercial institutions – the analysis of implementation of the Trusted Profile in the iPKO system];*
- International conference *International Cooperation and Competitiveness*, The Institute of World Economy, Warsaw School of Economics, Warsaw, 23rd June 2017, Paper entitled: *Big Data and Artificial Intelligence economic potential - selected case studies regarding technological innovations;*
- National conference *Działalność Organizacji Pozarządowych: Organizacje pozarządowe na rzecz społeczeństwa obywatelskiego*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 20-21st October 2017, Paper entitled: *Prognozy wpływu postępu technologicznego na funkcjonowanie instytucji publicznych i społeczeństwa – wybrane przykłady w oparciu o teorię „Czarnych Łabędzi” [Forecasts related to technological Progress influence on public institutions and society, based on „Black Swan theory”];*
- National conference *Logistyka i Zarządzanie w Mediach. Rafinacja Big Data – nowe źródło informacji*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 26th October 2017, Paper entitled: *Zastosowanie rafinacji Big Data przez konsultantów z Cambridge Analytica w kampanii dotyczącej Brexitu oraz prezydenckiej kampanii wyborczej w USA w 2016 roku – studium przypadku [Implementaton of Big Data refinement by Cambridge Analytica consultants Turing Brexir campaign and US residential campaign in 2016 – case study];*
- International conference *Przedsiębiorczość XXI wieku*, Faculty of Management, University of Warsaw, Warsaw, 16-17th November 2017, Paper entitled: *Artificial Intelligence (AI) and automation – future prospects for the economy and occupations;*
- National conference *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw, 13th December 2017, Paper entitled: *Wykorzystanie*

inteligentnych systemów w administracji publicznej miast [Implementation of Smart Systems in municipal administrative units];

- National conference *IX Ogólnopolska Konferencja Metodologiczna Medioznawców Człowiek hipermedialny; Komunikowanie w czasach gier video, social mediów i doświadczeń VR*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 15-16th November 2018, Paper entitled: *Wybrane prognozy przyszłości ludzkości w interakcji z nowymi technologiami [Selected forecasts regardin the future interactions of mankind with modern Technologies];*
- National conference *Działalność Organizacji Pozarządowych: Organizacje pozarządowe w stuleciu Polski niepodległej*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 23-24th November 2018, Paper entitled: *Perspektywy wykorzystania crowdsourcingu w sferze publicznej na podstawie doświadczeń z organizacji komercyjnych – analiza wybranych przypadków [Perspectives of impementation of crowdsourcing in the public sector based on patterns from commercial entities – analysis of selected cases];*
- National conference *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw 13-14th December 2018, Paper entitled: *Blockchain – perspektywy wdrożeń w sektorze publicznym [Blockchain – public sector implementation perspectives];*
- National conference *Nowe technologie i rozwój społeczeństwa informacyjnego – wyzwanie dla ustawodawcy*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 14th March 2019, Paper entitled: *Określenie najważniejszych trendów technologicznych w odniesieniu do najbliższej dekady [Determination of the technological megatrends in the coming decade];*
- National conference *Prawo mediów społecznościowych*, Wydział Prawa i Administracji UWM w Olsztynie, Olsztyn, 15.04.2019, Paper entitled: *Wykorzystanie danych użytkowników mediów społecznościowych przez Cambridge Analytica – studium przypadku [Refinement of social media users data by Cambridge Analytica – case study].*

I would like to mention that the presentations of the research results met with interest both from the part of the scientific community dealing with the subject of digital transformation of public institutions, as well as representatives of commercial organizations

interested in using the implementation possibilities of selected concepts, as well as representatives of the media declaring interest in the subject of dynamic technological transformations. In addition, I received an invitation to appear as an expert (the title of the lecture *The most important technological challenges in the process of creating the Digital State*) during the conference *New Challenges in Public Administration*, organized in Warsaw on 15th May 2019 by the Polish Institute for Business Development; the conference is addressed to representatives of public administration responsible for IT, IT security, communication and improvement of citizens' access to information and document management, streamlining processes within public institutions⁷.

My scientific research, and especially the book and publications documenting it, prove the importance of technological change in the functioning of modern society, it is taking place at an exponential rate. The huge dynamics of transformation means that a large part of society is not able to keep up with the acquisition of knowledge relating to the directions of technological development within both commercial organizations and public institutions. To the best of my knowledge, this is the first comprehensive study related to the digital transformation and the issues of the Digital State, taking into account both the current characteristics of the ongoing technological processes and the forecast of the development of the Digital State. Four scenarios of the development of the Digital State indicated in the book (*The e-Agora* interchangeably referred to as *Democratic Technopolis*, *The Techno-Corporate* scenario, *The Cybernetic* scenario and *The "Big Brother"* scenario) do not exhaust all available prognostic possibilities. They are, however, an important point of reference for professionals and institutions formulating strategies for technological development, taking into account complicated interrelations regarding: an individual, the sphere of commercial institutions, non-governmental organizations and public institutions. The book should be of interest to the academic community - constituting a valuable reference point for further research including areas such as machine learning, *Internet of Things*, *Big Data* refinement, issues related to *Open Data*, *Blockchain* technology, automation and robotics, and cybersecurity challenges. Research findings should also provide valuable guidance for decision-makers, public administration officials and professionals interested in implementation of refined data from the Internet to acquire new target groups, or closer cooperation with public institutions in the process of their modernization (eg representatives of financial institutions, *FinTech* organizations, etc.). The publication can also be used as a

⁷The conference website: <http://pirbinstytut.pl/index.php/nowe-wyzwania-w-administracji-publicznej-15-05-2019>

textbook in practical teaching in fields related to: *Big Data*, *e-government*, *e-business*, and training of public administration staff as part of post-graduate studies.

5. Overview of other research achievements

My scientific achievements after obtaining the doctoral degree consist of:

- 19 chapters in monographs;
- 3 monographs editions;
- 2 single-author monographs (including a monograph being the scientific achievement indicated in the application);
- 10 articles in scientific journals.

According to the bibliometric analysis of my scientific output, made for the preparation of this application, conducted in *Google Scholar* using *Publish or Perish (PoP)*: the total number of citations (*PoP* = full number of author publications) totals 26, Hirsch index - $h = 2$. with the MNiSW score, the value of my scientific achievements is 242 points.

Below are the main research topics to which I have devoted selected publications:

- 1) The first area of my research interests relates to the digital transformation of public institutions, that is, the themes identical to the above-described research area relating to scientific achievement. Considerations in this area, including the use of forms of active participation of citizens and consumers in the shaping of, for example, legislative work or new products, exploiting the opportunities for banking institutions to cooperate with the public sector, shaping a new type of public policy in urban areas, creating a new type of e-services for entrepreneurs and the evolution of the interaction between human and technical devices, are included in the following publications:
 - *Innowacje technologiczne we wdrażaniu e-usług dla przedsiębiorstw na przykładzie funkcjonowania Pojedynczego Punktu Kontaktowego [Technological innovations in implementation of e-services for entrepreneurs, based on example of Point of Single Contact]* [w:] *Studia i Materiały Wydziału Zarządzania Uniwersytetu Warszawskiego*, nr 1/2016 (20), Warsaw, 2016, p. 156-166, ISSN 1733-9758, Kowalczyk Marcin;
 - *Współpraca administracji publicznej i organizacji komercyjnych – analiza wdrożenia Profilu Zaufanego w systemie iPKO [Cooperation between the public administration and commercial institutions – the analysis of implementation of the Trusted Profile in the iPKO system]* [w:] *Rocznik Kolegium Analiz Ekonomicznych Szkoły Głównej Handlowej w Warszawie*, Zeszyt 46/2017, Warsaw, 2017, p. 135-148, ISSN 1232-4671, Kowalczyk Marcin;

- *Crowdsourcing w mediach elektronicznych - wybrane przykłady [Crowdsourcing in electronic media – selected cases]* [w:] *Logistyka i administrowanie w mediach – aspekty teoretyczne i aplikatywne*, ed. W. Cetera, A. Opolska-Bielańska, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 2017, p. 57-68, ISBN 978-83-944096-5-4, Kowalczyk Marcin;
- *Wykorzystanie inteligentnych systemów w administracji publicznej miast [Implementation of Smart Systems in municipal administrative units]* [w:] *Rocznik Kolegium Analiz Ekonomicznych Szkoły Głównej Handlowej w Warszawie, Zeszyt 52/2018*, Warsaw, 2018, p. 135-148, ISSN 1232-4671, Kowalczyk Marcin, Wilga Dominik;
- *Analiza ewolucji interakcji człowiek – komputer Analysis of Human-Computer interaction evolution* [w:] *Komunikowanie w świecie aplikacji*, ed. T. Gackowski, K. Brylska, M. Patera, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 2018, p. 95-109, ISBN 978-83-7545-904-3, Kowalczyk Marcin.

2) The second area of my research interests includes the issues related to democratization of the public space taking place with the assistance of information and communication technologies. My considerations within the above issues include the use of modern technologies in the promotion of activity on the public forum (including the participation of non-governmental organizations supporting grassroots initiatives, the use of information and communication technologies in improving decision-making processes in the public forum in the form of, among others, public consultations. this also includes the space for the emergence of civic movements that contest the actions of public authorities (I devoted this article to the social opposition movement in Iceland during the economic downturn). I have devoted the following publications to this research area:

- Monograph *e-urząd w komunikacji z obywatelem [e-government-citizen Communications]*, Wydawnictwa Akademickie i Profesjonalne, Warsaw, 2009, pp. 222, ISBN 978-83-61408-82-6, Kowalczyk Marcin;
- *Public relations zamiast marketingu politycznego. Ruch społecznego sprzeciwu w Islandii w okresie załamania gospodarczego [Public relations insted of political marketing. Social discontent movement in Iceland Turing economic downturn]* [w:] *Marketing polityczny a public relations. Różnice podobieństwa, kontrowersje*, ed. W.

Jabłoński, The institute of Journalism, University of Warsaw, Warsaw, 2014, p. 159-170, ISBN 978-83-7545-547-2, Kowalczyk Marcin;

- *Efektywność dialogu społecznego z uwzględnieniem aktywności jednostek i wpływu nowoczesnych technologii - analiza wyników z regionu Warmii i Mazur [Effectiveness of social dialogue involving individual participants and influence of ICT – case study of Warmia and Mazury region [w:] Studia Prawnoustrojowe, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 2015, p. 271-280, ISSN 1644-0412, Kowalczyk Marcin, Skowron Klaudia*
- *Dialog z wykorzystaniem technologii informacyjnych w perspektywie współpracy organizacji pozarządowych z administracją publiczną Dialogue involving ICT in the perspective of co-operation of non-government organizations (NGOs) and public administration [w:] Perspektywy rozwoju sektora organizacji pozarządowych, ed. U. Szymańska, M. Falej, P. Majer, M. Hejbudzki, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 2015, p. 105-116, ISBN: 978-83-62383-65-8, Kowalczyk Marcin, Skowron Klaudia*
- *Wpływ organizacji trzeciego sektora na kształtowanie postaw obywatelskich – analiza na podstawie badań Stowarzyszenia Klon/Jawor [The role of NGOs in building civil society – analysis based on research conducted by Klon/Jawor [w:] Prawo a ekonomia, alianse w budowie efektywnego państwa, ed. M. Kowalczyk, P. Majer, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 2016, p. 223-238, ISBN 978-83-62383-75-5, Skowron Klaudia, Kowalczyk Marcin*
- *Wykorzystanie nowoczesnych technologii informacyjno-komunikacyjnych (ICT) w promocji aktywności na forum publicznym [Information and Communication Technologies (ICT) use in promotion of civic engagement in Public Sphere [w:] Organizacje pozarządowe w ujęciu prawno-postulatywnym, ed. U. Szymańska, M. Falej, P. Majer, Wydział Prawa i Administracji UWM w Olsztynie, Olsztyn, 2017, p. 169-179, ISBN: 978-83-949079-0-7, Kowalczyk Marcin*

3) The third research area, which is devoted to publications in the field of broadly understood security in ICT systems, with some aspects regarding economic security of the citizens (in my view these issues are clearly noticeable while taking into account asymmetric flows of information assets between financial institutions and their clients), as well as issues of counter-terrorism. The inspiration for the last mentioned area has

been provided by real life experience. During my stay as an exchange High School student in Moore (Oklahoma City suburb) in Oklahoma, I was almost an eyewitness to the tragic events of the day. On April 19, 1995 the religious extremist Timothy McVeigh, in an attack on a federal building in Oklahoma City (McVeigh detonated a delivery truck filled with explosives) managed to kill 168 people, including relatives of some of the students from the High School I attended. I have also developed interest in the issues of national security while completing National Security Study at the Institute of International Relations at the Faculty of Journalism at the University of Warsaw, conducted jointly with the National Security Bureau and the Ministry of National Defence of Republic of Poland. The following publications are devoted to the indicated research area:

- *Instytucjonalne przyczyny islandzkiego kryzysu finansowego [Institutional causes of Icelandic financial crisis]* [w:] *Zeszyty Naukowe Gdańskiej Wyższej Szkoły Administracji*, Gdansk School of Higher Education in Administration, Gdansk, 2011, p. 58-76, ISSN 1896-2505, Kowalczyk Marcin, Fierek Mariusz;
- *Instytucjonalne uwarunkowania kryzysu strefy euro [Institutional causes of Eurozone crisis]* [w:] *Zeszyty Naukowe Gdańskiej Szkoły Wyższej*, nr 13, Gdansk School of Higher Education, 2013, p. 198-212, ISSN 2300-9055, Kowalczyk Marcin, Fierek Mariusz;
- *Nieprawidłowości związane z prywatyzacją islandzkiego sektora finansowego - analiza przypadku [Irregularities in privatization of Icelandic financial sector – case study]* [w:] *Journal of Modern Science*, Tom 1/16/2013, Wydawnictwo Wyższej Szkoły Gospodarki Euroregionalnej im. Alcide De Gasperi w Józefowie, Józefow, 2013, p. 355-371, ISSN: 1734-2031, Kowalczyk Marcin;
- *Aspekty technologiczne i komunikacyjne działań przygotowawczych w zakresie bezpieczeństwa i porządku publicznego związane z organizacją Euro 2008 – wzorce dla Polski jako gospodarza Euro 2012 [Technological and Communications aspects of preparatory activities regarding safety and public order in relation to Euro 2008 – patterns for Poland, Euro 2012 host nation]* [w:] *Sprawność a legalność działania administracji publicznej w sferze ochrony porządku i bezpieczeństwa publicznego*, ed. P. Stanisz, M. Czuryk, K. Ostaszewski, J. Święcki, Wydawnictwo KUL, Lublin, 2014, p. 573-586, ISBN 978-83-7702-785-1, Kowalczyk Marcin;

- *System informowania o ryzyku kursowym w odniesieniu do kredytów hipotecznych denominowanych w walutach obcych - analiza porównawcza [Information on FX risk for mortgage loans denominated in foreign currencies – comparative analysis]* [w:] *Prawo a ekonomia, alianse w budowie efektywnego państwa*, ed. M. Kowalczyk, P. Majer, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 2016, p. 9-21, ISBN 978-83-62383-75-5, Kowalczyk Marcin.
- 4) The next research area takes into account the social aspects of new media. In this area, I took into account the considerations relating to the functions and dysfunctions of media messages in relation to the youngest recipients of their content. In addition, I undertook a subject related to the electronic forms of mobbing in the workplace, taking into account the comparative analysis of traditional and electronic forms of mobbing in the professional environment. I have devoted the following publications to the indicated area:
- *Kształowanie postaw moralnych dzieci poprzez przekazy medialne - analiza uwzględniająca funkcje i dysfunkcje mediów masowych [Moral upbringing of children by media messages – analysis taking into account functions and dysfunctions of mass media]* [w:] *Wychowanie religijne i moralne*, ed. M. Różański, R. Sztuchmiller, Wydawnictwo UWM w Olsztynie, Olsztyn, 2015, p. 251-260, ISBN: 978-83-62383-61-0. Kowalczyk Marcin, Skowron Klaudia;
 - *Elektroniczne formy mobbingu w miejscu pracy [e-mobbing in workplace environment]* [w:] *Mobbing in the social and economic perspective*, ed. Z. Majkut, M. Uramova, Wydawnictwo Iva House Publishing Chicago Publisher, 2015, p. 115-126, ISBN: 978-09-88993-03-7, Kowalczyk Marcin
- 5) The last area of my research takes into account the economic aspects of the use of new technologies, including the logistics and transport sector, as well as the subject of the macroeconomic dimension of structural transformations at the regional level. I have devoted the following publications to this problem:
- *Rola infrastruktury transportu w zrównoważonym rozwoju [The function of infrastructure in the sustainable development]* [w:] *Logistyka w dobie zrównoważonego rozwoju*, ed. J. Mikołajczak, Wydawnictwo Bydgoskiej Szkoły Wyższej, Bydgoszcz, 2012, p. 199-209, ISBN 978-83-923256-9-7, Fierek Mariusz, Kowalczyk Marcin;
 - *Nowoczesne technologie w systemach zarządzania transportem [Modern Technologies implemented in transport management systems]* [w:] *Logistyka w dobie*

zrównoważonego rozwoju, ed. J. Mikołajczak, Wydawnictwo Bydgoskiej Szkoły Wyższej, Bydgoszcz, 2012, p. 222-230, ISBN 978-83-923256-9-7, Kowalczyk Marcin, Fierek Mariusz;

- *Transport jako krwiobiegi gospodarki – morfologia terminu [Transport as economic blood system – the term morphology]* [w:] *Zeszyty Naukowe Gdańskiej Szkoły Wyższej*, nr 13, Gdansk School of Higher Education, Gdansk, 2013, p. 176-197, ISSN 2300-9055, Fierek Mariusz, Kowalczyk Marcin;
- *Rozwój społeczno-gospodarczy województwa warmińsko-mazurskiego wynikający z integracji regionalnej Polski z Unią Europejską [Warmińsko-mazurskie Province socio-economic development related to EU integration]* [w:] *Warmia i Mazury na tle trendów globalnych*, red. M. Fierek, P. Sigurska-Fierek, Wydawnictwo Gdańskiej Szkoły Wyższej, Gdansk, 2013, p. 57-66, ISBN 978-83-89762-50-4, Fierek Mariusz, Kowalczyk Marcin.

Conferences

Since I have obtained my doctor al degree, I have participated in the following scientific conferences (with the following distinction: international conferences and national conferences):

1) International conferences

- *ICASS VII: Circumpolar Perspectives in Global Dialogue: Social Sciences beyond the International Polar Year*, University of Akureyri, Akureyri, Islandia, 25th June 2011, Paper entitled: *Social Impact of the recession in the Nordic states – a study of Iceland*;
- *Międzynarodowa Konferencja Prawa Porównawczego*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 03rd March 2012, Paper entitled: *Institutional causes of European Union crisis*;
- *Międzynarodowa Konferencja Praw Człowieka*, Uniwersytet w Bratysławie, Bratislava, Slovakia, 8th June 2012, Paper entitled: *Fiscal union as institutional remedy for Eurozone*;
- *Mobbing w aspekcie prawnym, ekonomicznym i społecznym*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Ogonki, 18-20th May 2015, Paper entitled: *Elektroniczne formy mobbingu w miejscu pracy [e-mobbing in workplace environment]*;

- *Przedsiębiorczość XXI wieku*, Faculty of Management, University of Warsaw, Warsaw, 26-27th November 2015, Paper entitled: *Innowacje technologiczne we wdrażaniu e-usług dla przedsiębiorstw na przykładzie funkcjonowania Pojedynczego Punktu Kontaktowego*;
- *International Cooperation and Competitiveness*, The Institute of World Economy, Warsaw School of Economics, Warsaw, 23rd June 2017, Paper entitled: *Big Data and Artificial Intelligence economic potential - selected case studies regarding technological innovations*;
- *Przedsiębiorczość XXI wieku*, Faculty of Management, University of Warsaw, Warsaw, 16-17th November 2017, Paper entitled: *Artificial Intelligence (AI) and automation – future prospects for the economy and occupations*.

2) National conferences

- *Wirtualne targowisko*, UKSW, Warsaw, 5th December 2012, Paper entitled: *Wykorzystanie nowoczesnych technologii w procesie konsultacji społecznych – analiza wybranych przypadków [Implementation of modern Technologies in public consultation process – analysis related to selected cases]* ;
- *II Seminarium Wydziału Prawa i Administracji UWM w Olsztynie Władza w prawie*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 16th February 2013, Paper entitled: *Nowoczesny system konsultacji społecznych w Polsce [Modern system of public consultation in Poland]*;
- *IV Seminarium Wydziału Prawa i Administracji UWM w Olsztynie Prawo a ekonomia – alianse w budowie efektywnego państwa*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 19th February 2015, Paper entitled: *System informowania o ryzyku kursowym w odniesieniu do kredytów hipotecznych w obcych walutach; analiza porównawcza [Information on FX risk for mortgage Loans denominated in foreign currencies – comparative analysis]*;
- *IV Ogólnopolska Konferencja Prawa Małżeńskiego i Rodzinnego Wychowanie religijne i moralne*, University of Warmia and Mazury in Olsztyn, Olsztyn, 6th May 2015, Paper entitled: *Kształtowanie postaw moralnych dzieci poprzez przekazy medialne - analiza uwzględniająca funkcje i dysfunkcje mediów masowych [Moral upbringing of children by media messages – analysis taking into account functions and dysfunctions of mass media]*;

- *Logistyka i Zarządzanie w Mediach. Media Regionalne, Nowe Media, Monetyzacja*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 20-21st October 2016, Paper entitled: *Crowdsourcing w mediach elektronicznych – analiza zjawiska [Crowdsourcing in electronic media – analysis of the phenomena]*;
- *Prawo rynku finansowego jako odrębna gałąź prawa*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 24th October 2016, Paper entitled: *Rekomendacje Komisji Nadzoru Finansowego – ujęcie prawno-ekonomiczne [Financial Supervisory Board recommendations – legal and economical aspects]*;
- *Memy czyli życie społeczne w czasach kultury obrazu*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 17-18th November 2016, Paper entitled: *Charakterystyka e-usług zorientowanych na użytkownika – analiza wybranych zastosowań eGov 2.0 [Characteristics of user-centric e-services – an analysis of selected eGov 2.0 implementations]*;
- *Działalność Organizacji Pozarządowych: Organizacje pozarządowe w ujęciu prawno-postulatywnym*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 25-26th November 2016, Paper entitled: *Nowoczesne technologie informacyjno-komunikacyjne (ICT) – Wykorzystanie w promocji aktywności obywatelskiej na forum publicznym [Modern ICT – implementation in promoting civil engagement in public pshere]*;
- *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw, 7th December 2016, Paper entitled: *Współpraca administracji publicznej i organizacji komercyjnych – analiza wdrożenia Profilu Zaufanego w systemie iPKO [Cooperation between the public administration and commercial institutions – the analysis of implementation of the Trusted Profile in the iPKO system]*;
- *Działalność Organizacji Pozarządowych: Organizacje pozarządowe na rzecz społeczeństwa obywatelskiego*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 20-21st October 2017, Paper entitled: *Prognozy wpływu postępu technologicznego na funkcjonowanie instytucji publicznych i społeczeństwa – wybrane przykłady w oparciu o teorię „Czarnych Łabędzi” ; [Forecasts related to technological Progress influence on public institutions and society, based on „Black Swan theory”]*;

- *Logistyka i Zarządzanie w Mediach. Rafinacja Big Data – nowe źródło informacji*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, Warsaw, 26th October 2017, Paper entitled: *Zastosowanie rafinacji Big Data przez konsultantów z Cambridge Analytica w kampanii dotyczącej Brexitu oraz prezydenckiej kampanii wyborczej w USA w 2016 roku – studium przypadku ; [Implementaton of Big Data refinement by Cambridge Analytica consultants Turing Brexir campaign and US residential campaign in 2016 – case study];*
- *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw, 13th December 2017, Paper entitled: *Wykorzystanie inteligentnych systemów w administracji publicznej miast [Implementation of Smart Systems in municipal administrative units];*
- *IX Ogólnopolska Konferencja Metodologiczna Medioznawców „Człowiek hipermedialny; Komunikowanie w czasach gier video, social mediów i doświadczeń VR*, Faculty of Journalism, Information and Book Studies, University of Warsaw, Warsaw, 15-16th November 2018, Paper entitled: *Wybrane prognozy przyszłości ludzkości w interakcji z nowymi technologiami [Selected forecasts regardin the future interactions of mankind woth modern Technologies];*
- *Działalność Organizacji Pozarządowych: Organizacje pozarządowe w stuleciu Polski niepodległej*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 23-24th November 2018, Paper entitled: *Perspektywy wykorzystania crowdsourcingu w sferze publicznej na podstawie doświadczeń z organizacji komercyjnych – analiza wybranych przypadków [Perspectives of impementation of crowdsourcing in the public sector based on patterns from commercial entities – analysis of selected cases];*
- *Technologie Informacyjne w Administracji Publicznej i Służbie Zdrowia*, The Institute of Information Systems and Digital Economy, Warsaw School of Economics, Warsaw, 13-14th December 2018, Paper entitled: *Blockchain – perspektywy wdrożeń w sektorze publicznym [Blockchain – public sector implementation perspectives];*
- *Nowe technologie i rozwój społeczeństwa informacyjnego – wyzwanie dla ustawodawcy*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 14th March 2019, Paper entitled: *Określenie najważniejszych*

trendów technologicznych w odniesieniu do najbliższej dekady [Determination of the technological megatrends in the coming decade];

- *Prawo mediów społecznościowych*, Faculty of Law and Administration, University of Warmia and Mazury in Olsztyn, Olsztyn, 15th April 2019, Paper entitled: *Wykorzystanie danych użytkowników mediów społecznościowych przez Cambridge Analytica – studium przypadku [Refinement of social media users data by Cambridge Analytica – case study]*.

Other research activities

After obtaining the doctoral degree, in the period from 07.2010 to 06.2011, I completed a 12-month academic internship at the University of Akureyri in Iceland, financed by the Norwegian Fund. EEA operator in Poland is the Scholarship and Training Fund (assessment of the my application made by two experts, amounted to 10.0 points on a scale of 0-10 points). My research during the stay in Iceland focused on the analysis of e-government implementations in Iceland, and in a broader context - in the Nordic countries.

I also acted as the coordinator of the following research grant:

- In the years 2014-2015 I managed the research grant at the Department of Economics and Administration of Public Institutions at the Faculty of Law and Administration at the University of Warmia and Mazury in Olsztyn (the research grant entitled: *Selected issues of economics and public administration*);
- In the years 2016-2017 I managed the research grant at the Department of Economics and Public Administration, and later at the Department of Legal Protection of the State at the Faculty of Law and Administration at the University of Warmia and Mazury in Olsztyn (the research grant entitled: *Effectiveness of Polish public law*).

My other research activities also include:

- Around a dozen business consulting projects for the SME sector under the Innovation Voucher Program, carried out on behalf of the Polish Agency for Enterprise Development;
- Preparatory visits as part of calls for proposals from the Norwegian Mechanism - conducted at: Akureyri, Iceland, 04.2013; As, Norway, 05.2014;

- Internships in enterprises within the framework of the program for UWM researchers in Olsztyn; internship at Michelin Olsztyn (8-9.2009), internship at ITM Software House Olsztyn (03/05/2014);
- Research and teaching internship at the Faculty of Management at the University of Warsaw, 03/04/2015.

Organizational and teaching activities; awards

since obtaining my doctoral thesis I focused on the following organizational activities

- Co-ordination of a series of seminars at the Faculty of Law and Administration of the University of Warmia and Mazury in Olsztyn. I was responsible for coordinating the preparations of the 2nd Seminar of the Faculty of Law and Administration of the UWM in Olsztyn *Władza w prawie*, 16th February 2013; 3rd Seminar of the Faculty of Law and Administration at the UWM in Olsztyn *10 lat Polski w Unii Europejskiej*, 13th February 2014; and the 4th Seminar of the Faculty of Law and Administration at the UWM in Olsztyn, combined with the 70th anniversary of Prof. Roman Przybyszewski *Prawo a ekonomia – alianse w budowie efektywnego państwa*, 19th February 2015. I was also the organizer of the international scientific conference *Mobbing in the legal, economic and social perspective*, organized by the Faculty of Law and Administration UWM in Olsztyn in Ogonki, 18-20th May 2015;
- Since 2010 I have been continuously a member of the Faculty of Law and Administration UWM in Olsztyn;
- After obtaining the doctoral degree, I performed didactic trips as part of the Socrates Erasmus program. The vistis took place at the University of Akureyri in Iceland, 04.2012 and the University of Valencia in Spain, 02.2013; 02.2015;
- Since 10.2015 I am a member of the Management Board of the Olsztyn branch of the Polish Economic Society (PTE);
- In 2015, I received the Rector's Award of the UWM in Olsztyn (Third-degree team award);
- In the years 2017-2018 I participated in the work of the faculty commission for scientific research at the Faculty of Law and Administration of UWM in Olsztyn;
- I am a reviewer of one of the publications for the scientific journal *Politeja (UJ)*;

- I regularly serve as an expert in e-governance, appearing for TVP Olsztyn news programs. In addition, I regularly participate in meetings popularizing science, organized in Olsztyn by the multimedia library Planeta 11.

My teaching activities at the University of Warmia and Mazury include lectures for students in the fields of law, administration, internal security, e-administration. Among my classes, there are both compulsory classes (*Introduction to electronic administration, Social communication, Information technologies in administration, Fundamentals of economics, Fundamentals of economics for administration*), as well as elective courses, specialization and optional subjects (*e-Governance 2.0, Social communication theory, The role of the media in crisis situations, Logistics*). In addition, at both the University of Warmia and Mazury and the University of Warsaw, I taught English-language classes for students enrolled in the Socrates-Erasmus program (subjects: *Introduction to Mass Communication, Economics, Terrorism and Anti-terrorism*). I am also one of the lecturers who conduct practical classes for students of the Business Academy operating at the University of Warmia and Mazury in Olsztyn, as the first institution in Poland functioning as an inter-faculty school of entrepreneurship (I teach the practical course on *IT in business*). I have supervised 60 diploma theses in the field of e-administration, crisis management, modernization of public institutions, for the students of the following faculties: administration, internal security, e-administration at the Faculty of Law and Administration of University of Warmia and Mazury in Olsztyn.

Marcin Kowalczyk