# THEORETICAL AND PRACTICAL DILEMMAS OF DEFINING THE CONCEPT OF INNOVATION

## TEORETYCZNE I PRAKTYCZNE DYLEMATY DEFINIOWANIA POJĘCIA INNOWACJE

https://doi.org/10.34739/zn.2023.61.19

## Teresa Myjak

Poland, University of Applied Sciences in Nowy Sącz, Faculty of Economic Sciences myjakt@wp.pl, ORCID: 0000-0001-9282-3933

JEL Classification Codes: J24, M54, O31, O35

Abstract: Innovations can take the form of implementing a modernised process, method or practical solutions in an enterprise, aimed at achieving specific benefits in the economic and social sphere. Innovations are related to specific changes in various functional areas of the organisation, including personnel. The cognitive purpose of the publication is to present the concept of innovation based on selected – national and foreign – literature on the subject. The goal of the research was to identify how innovations are defined in economic practice, especially in relation to the personnel area. The research problem was focused on obtaining an answer to the question regarding the perception of the concept of innovation in the personnel area. It was assumed that innovation in the personnel area is understood as the implementation of an improved process, method or solutions in the enactment of the personnel function. The empirical data was obtained using a survey technique with the use of a questionnaire. Empirical research was characterised by: subject, object, time and research space. The most important findings indicate that almost half of the respondents perceive innovation as a process, method or solution in the implementation of the personnel function. The conclusions from the research boil down to the statement that the Schumpeterian concept (promoting the understanding of innovation as the first application of a given invention in economy) turned out to be a rather distant concept for contemporary practitioners

Keywords: innovations, the essence of innovation, competitiveness, enterprise

Streszczenie: Innowacje mogą przybierać formy: wdrożenia zmodernizowanego procesu, metody lub praktycznych rozwiązań w przedsiębiorstwie, ukierunkowanych na osiągnięcie konkretnych korzyści w sferze ekonomicznej i społecznej. Innowacje są związane z określonymi zmianami w różnych obszarach funkcjonalnych organizacji, w tym także – personalnym. Celem poznawczym publikacji jest zaprezentowanie pojęcia *innowacje* w oparciu o wybraną – krajową i obcojęzyczną – literaturę przedmiotu. Celem badawczym stało się rozpoznanie, jak w praktyce gospodarczej określane są innowacje, zwłaszcza w odniesieniu do obszaru personalnego. Problem badawczy ukierunkowany został na uzyskanie odpowiedzi na pytanie dotyczące postrzegania pojęcia *innowacje* w obszarze personalnym. Przyjęto założenie, że innowacja w obszarze personalnym jest rozumiana jako wdrożenie ulepszonego procesu, metody lub rozwiązań w realizacji funkcji personalnej. Dane empiryczne uzyskano przy wykorzystaniu techniki badania ankietowego z zastosowaniem kwestionariusza ankiety. Badania empiryczne zostały scharakteryzowane przez: podmiot, przedmiot, czas oraz przestrzeń badawczą. Najważniejsze ustalenia wskazują na fakt, że niemal połowa ankietowanych postrzega innowacje jako proces, metodę lub rozwiązanie w realizacji funkcji personalnej. Wnioski z badań sprowadzają się do stwierdzenia, że koncepcja schumpeterowska (promująca rozumienie innowacji jako pierwsze zastosowanie danego wynalazku w gospodarce) okazała się raczej odległą dla współczesnych praktyków.

Słowa kluczowe: innowacje, istota innowacji, konkurencyjność, przedsiębiorstwo

#### Introduction

Interest in the issues of innovation has evolved over the years, along with the changes that have taken place (Janasz, Kozioł, 2007). This interest is probably due to the fact that innovations – on a macro scale – play a large role in the economy (Knauff, 2012), and – on a micro scale – they contribute to the increase in the market value of the company and increase its modernity (Makieła, 2018).

Innovations create opportunities for economic entities to achieve a competitive advantage and, consequently, to compete more effectively (Żebrowski, Waćkowski, 2011), as they are one of the basic sources of competitive advantage (Gierulski et al., 2018) in every competitive environment (Appelo, 2016). Competitiveness through innovation is an important issue for both SMEs and decision makers, especially in relation to traditional sectors that make a significant contribution to economic growth

© ®

(Salavou, Baltas, Lioukas, 2004). It should be noted that innovations are an opportunity for enterprises to survive in a turbulent environment (Knosala, Deptuła, 2018), hence they require targeted actions (Koza, 2021). Moreover, the quality of innovation depends on the level of competitiveness, overcoming limitations (Karlik, 2013), and also depends on the acceptance of the social system, which is needed for each innovation (Myjak, 2019). Access to financial resources can encourage companies to seek breakthrough innovations (Wies, Moorman, Chandy, 2023).

The issue of innovation is currently very extensively represented in studies of a theoretical and practical nature. This applies to both foreign and domestic literature. The multifaceted nature of considerations on the issue of innovation means that the term innovation does not have a single, commonly accepted definition. Individual authors dealing with this issue propose different definitions and typologies. Formulating a single, universal definition entails systematising the terms of innovation and classifying them according to the adopted criteria.

Here I have also attempted to show how innovations are understood - based on selected literature on the subject. These issues were devoted to the first part of the considerations (conventionally called theoretical), where a literature analysis was used as a research method. The diversity of perceptions of the definition of innovation inspired the author to recognise how innovations are perceived in the current economic reality. The empirical part, which also includes the methodological aspects of the study, presents the results of primary research carried out in enterprises of the SME sector in the Małopolska region, which showed the diversity of defining innovations by practitioners of the surveyed enterprises. Therefore, the results of the research confirmed the theoretical findings related to the heterogeneity of definitions of the concept of innovation. It is understood as: the implementation of an improved process, the method or solutions in the implementation of the personnel function; a change introduced in order to obtain specific economic and social benefits; development and implementation of new solutions (know-how); the act of implemented, specific change or its effect; and the first introduction (application) of a new process, system or procedure.

My research made recourse to an original research tool – a standardised questionnaire. A quantitative approach was used in the presentation of the research material.

#### Literature review

Innovation is a very capacious, ambiguous and commonly overused term. The ambiguity of understanding innovation results from the fact that for a long time innovation has been referred to various areas of human life, e.g. law, economics or sociology (Zabłocka-Kluczka, 2019). The complexity, multifacetedness and multithreading of innovations make it difficult to interpret this concept (Janasz, 2011). D. Firszt (2015) notes that there are some discrepancies in defining innovations by various authors, e.g. regarding the degree of novelty or radical change that deserves the name of innovation, but they are not of fundamental importance.

The term "innovation" can be related to: the concept (idea, project) of a new state of affairs, the process of implementing this concept, or a new state of affairs (not necessarily in line with the intended one) resulting from this process (Janasz, 2011). U. Diedrichs (2009) indicates that innovations related to the concept of management are understood in different ways, because:

- the innovation introduced by the concept of governance is seen as a specific way of capturing collective decision-making, as opposed to traditional concepts such as "governance";
- the innovation introduced by the European Union captures this concept as a specific term for "management without governance", especially as a form of "multi-level management" or "network model of management";
- innovation understood through the prism of changes within the EU management system, leading to the emergence of new methods, when the EU itself makes decisions, departing from its own "traditional" forms and methods.

Table 1 presents selected definitions of innovations in the national literature on the subject. It shows that innovation is associated with e.g. changes, innovation processes, civilization progress or the introduction of new solutions.

Innovations in foreign language literature are defined as: everything that is perceived as new (Rogers, 1983; Kotler, 1994), e.g. a new product, service, process, structure, administrative system, new plan or program (Damanpour, 1991), or new technologies (Grant, 2011). Another definition captures innovations as changes in the subject of the company's activity or changes in the organisation and management methods (Drucker, 1992). Many definitions of innovation include the term "new" (Pieniacka, 2016). Some definitions of the concept of innovation are presented in Table 2.

Table 1. Perception of the concept of innovation in the literature on the subject (national authors)

No	Author (year)	The concept of innovation
1	Pietrasiński (1971)	Innovations are changes deliberately introduced by man or cybernetic systems designed by him, consisting in replacing the existing states of affairs with others, positively assessed in the light of specific criteria and contributing to progress
2	Penc (1999)	Innovations are the result of innovative processes, i.e. a whole series of changes ensuring their creation, development and implementation into practice, as well as further improvement
3	Firszt, Jabłoński (2016)	Innovation is the act of introducing a specific change, or its effect (a new product, process), and its implementation is preceded by a series of events referred to as the innovation process
4	Janasz, Wiśniew- ska (2017)	Innovations are not only an indicator, but also a requirement of modern civilization progress
5	Makieła (2018)	Innovation is the process of transforming existing possibilities into new ideas and putting them into practical use
6	Tutaj (2019)	Innovation is a term for the discovery and implementation of a new way of doing things, a term considered in relation to a result, new product or process, improved solution, technique, technology or organisation
7	Firszt, Jabłoński (2022)	Innovation is a new solution in various areas of the management process (e.g. products, processes, organisation methods, etc.), implemented in practice and bringing positive effects in the economic dimension

Source: own elaboration based on the items indicated in the table.

Table 2. Overview of selected definitions of innovation in foreign literature (foreign authors)

		3 ( 3 )	
No	Author (year)	Definitions of innovation	
1	Rogers (1983)	Innovation is an idea, practice, or object that is perceived as new	
2	Damanpour (1991)	Innovation is a new product or service, a new technological process, a new structure or administrative system, or a new plan or program for members of an organisation	
3	Drucker (1992)	Innovation is a change in product design, marketing method, price offered, service, changes in organisation and management methods	
4	Kotler (1994)	Innovation is a specific good, service or idea that is perceived by someone as new. An idea may have been around for a long time, but it is an innovation to the person who sees it as new	
5	Grant (2011)	Innovations are new products or processes that incorporate new technologies	
6	Kogabayev, Mazi- liauskas (2017)	Innovation is a fundamental activity for the development and efficiency of any economic activity	
7	Griffin (2017)	Innovation is the directed effort of an organisation to develop new products or services, or new applications for products or services that already exist	
8	Taylor (2017)	Innovation can be considered as being product or process, that is new or is existing but has been improved	
9	Oslo Manual (2018)	Innovation is a new or improved product or process (or a combination of them), significantly different from previous products or processes, that has been made available to potential users (i.e. product) or put into use by an entity (i.e. process)	
10	Singh, Aggarwal (2022)	Innovation is "the operationalization of creative potential with a commercial and/or social motive by implementing new adaptive solutions that create value, harness new technology or invention, contribute to competitive advantage and economic growth"	

Source: own elaboration based on the items indicated in the table.

As noted by W. Janasz (2011), the concept of innovation is most often applied to specific products, services provided (methods of production), each new thought and organisation (action) of the production process, based on new or unused knowledge, one that is accepted and used by the enterprise — it is an innovation in the material sense. In the operational (functional) sense, innovation is understood by this author as the entire

process including its creation, design, implementation, adaptation and use, which is aimed at the practical application of a new product or a new manufacturing method.

### Methodology

Preparation for the implementation of quantitative research included a review of the literature on the

concept of innovation, so that it was then possible to refer to the perception of this concept by the respondents. The implementation of the research objective, defined as the recognition of the understanding of the concept of innovation, especially in the personnel area, was possible thanks to primary research conducted among representatives of enterprises from the SME sector. To achieve the goal, a quantitative research approach was used using survey methodology. The choice of study and quantitative methodology was based on the conceptualization of the research. The selection of the research sample resulted from the research assumptions (the examination of over 100 business entities from various sectors of the economy) and the location of the research in the Małopolska Region. As part of the research process, a purposeful selection of the research sample was made. The study took the form of a standardised survey, which was distributed in a printed (paper) version. The completed forms were returned in the same form. 115 correctly completed questionnaires were qualified for the analysis of the research results. The research sample included owners and/or decisionmakers representing a specific enterprise defined as: micro-enterprise (35%), small enterprise (40%) and medium-sized enterprise (24%). 1% of the respondents did not specify the size of the enterprise measured by the number of employees. Enterprises dealt mainly with: services (65%), production (27%) and trade (16%). Some of them were engaged in "mixed" activity (e.g. production and trade), therefore the percentage of indications does not add up to 100%. The enterprises were located in four districts of the Małopolska Voivodship, namely: Nowy Targ, Gorlice, Nowy Sacz and Limanowa. The market of business entities was indicated as: local (37%), national (49%) and international (10%). The remaining 4% – no indications.

The primary data was collected by applying the survey technique utilizing the author's questionnaire. The research results are a part of broader empirical research carried out by the author. They present the basic research results, which was the author's intention (without making an in-depth analysis. While presenting the empirical data, a descriptive analysis of the basic research results was used. Data were rounded to full response percentages.

Table 3 summarises the scope of the research carried out, referring to the indication of: the subject and object of the research, as well as the time and place of the research procedure.

Table 3. Scope of conducted empirical research

Scope	Specification	
	the survey involved the owners of enter-	
	prises from the SME sector, as well as de-	
subjec-	cision-makers representing the enterprise	
tive	who had knowledge in the area of person-	
	nel. Each company was represented by	
	one person	
objec-	The research concerned the definition of	
tive	the concept of innovation in theoretical	
uve	and practical terms	
time	a temporary study was started and finali-	
uiiie	sed in 2022	
	the enterprises participating in the study	
area	were located in the southern part of the	
	Małopolska Voivodship	

Source: own elaboration.

#### Results

The reflections included in the theoretical part of this study became the starting point for research into how the respondents understand innovations in the personnel area. To this end, the respondents were asked directly to answer the following question: how do you understand the concept of innovations in the personnel area? The research hypothesis assumed that innovations in the personnel area are understood as the implementation of an improved process, method or solutions in the application of the personnel function.

**Table 4.** Understanding of the concept of innovations in the personnel area (in % of responses)

Specification	% of indications
implementation of an improved pro- cess, method or solutions in the appli- cation of the personnel function	48
development and implementation of new solutions (know-how)	47
a change introduced in order to obtain specific economic and social benefits	44
act of implemented, specific change or its effect	27
the first introduction (application) of a new process, system or procedure	13

Source: own calculation on the basis of research results.

Table 4 shows that innovations, by almost half of the respondents, are understood as: implementation of an improved process, method or solutions in the application of the personnel function, but also: development and implementation of new solutions (know-how). Less indications were observed in the case of the option: introduced change in order to obtain specific economic and social benefits. More

than every fourth respondent was in favour of the option: the act of implemented, specific change or its effect. The fewest indications (13%) concerned the understanding of the concept of innovation as the first introduction (application) of a new process, system or procedure. The respondents did not indicate terms other than those listed in Table 4.

Table 5 shall present the obtained research results broken down by features differentiating economic entities. It shows how the question asked was answered by people representing a specific enterprise, taking into account the value specified as the highest and lowest percentage of indications (in relation to all respondents).

Table 5. Respondents' answers broken down by characteristics identifying enterprises (in % of responses)

Specification		Most indications	Least indications
	Production	introduced change to obtain specific economic and social benefits (15)	no indication
Type of activity	Services	implementation of an improved process, method or solutions in the implementation of the personnel function (33)	first introduction (application) of a new process, system or procedure (10)
uonvity	Trade	implementation of an improved process, method or solutions in the performance of the personnel function (8)	first introduction (application) of a new process, system or procedure (2)
	Local	introduced change to obtain specific economic and social benefits (19)	first introduction (application) of a new process, system or procedure (6)
Action market	National	implementation of an improved process, method or solutions in the implementation of the personnel function (23)	first introduction (application) of a new process, system or procedure (5)
	International	development and implementation of new solutions (know-how) (6)	no indication
	To 9 persons	change introduced in order to obtain specific economic and social benefits (19)	first introduction (application) of a new process, system or procedure (7)
Emp- loyment size	From 10 to 49	implementation of an improved process, method or solutions in the implementation of the personnel function (22)	first introduction (application) of a new process, system or procedure (4)
3123	From 50 to 249	implementation of an improved process, method or solutions in the application of the personnel function (16)	first introduction (application) of a new process, system or procedure (1)

Source: own calculation on the basis of research results.

Taking into account the answers of the respondents, and the metric features differentiating enterprises (Table 5), it was observed that the respondents' indications regarding the understanding of the concept of innovation (in relation to all the respondents) focused either on: the change introduced in order to obtain specific economic and social benefits, or on: implementing an improved process, method or solutions in the application of the personnel function. In the first case, respondents representing enterprises employing up to 9 people and those operating on the local market and with a production profile were in the lead. In the second case, the following should be mentioned: service enterprises operating on the domestic market and medium-sized enterprises. As for the representatives of enterprises operating on the international market, they chose the option: development and implementation of new solutions (know-how).

Taking into account the answers of the respondents with the lowest percentage of indications, all of them agreed (except for practitioners from production and international enterprises) that innovation was defined as: the first introduction (application) of a new process, system or procedure.

#### **Conclusions**

Innovations, including innovations in the personnel area, play an important role in the enterprise, and consequently in the economy. The ability of enterprises to implement innovations is one of the most important elements affecting their innovative potential, and the dissemination of innovations largely depends on the social system of employees at the disposal of the organisation – i.e. qualifications, skills of employees, as well as broadly understood competences of employees.

The respondents' answers show that the Schumpeterian concept (promoting the understanding of innovation as the first application of a given invention in the economy) turned out to be rather distant concept for the respondents who understand innovations more as a process, method or solution in the implementation of the personnel function than as the first introduction (application) of a new process, system or procedure.

#### References

- Appelo, J. (2016). Zarządzanie 3.0: kierowanie zespołami z wykorzystaniem metodyk [Management 3.0: managing teams using methodologies]. Gliwice: Helion.
- Damanpour, F. (1991). Organisational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *The Academy of Management Journal*, 34 (3), 555-590.
- Diedrichs, U. (2009). Metody zarządzania w Unii Europejskiej. [Management methods in the European Union], in: L. Kolarska-Bobińska (ed.), *Nowe metody zarządzania w państwach Unii Europejskiej* (pp. 13-30) [New management methods in the European Union countries]. Warszawa: Instytut Spraw Publicznych.
- Drucker, P.F. (1992). *Innowacja i przedsiębiorczość:* praktyka i zasady [Innovation and Entrepreneurship: Practice and Principles]. Warszawa: PWE.
- Firszt, D. (2015). Dyfuzja innowacji i konwergencja technologiczna. [Diffusion of innovation and technological convergence], in: Ł. Jabłoński (ed.), Konwergencja, kapitał ludzki, innowacje. Polska w perspektywie porównawczej (pp. 45-64) [Convergence, human capital, innovation. Poland in a comparative perspective]. Warszawa: CeDeWu.
- Firszt, D., Jabłoński, Ł. (2016; 2022). Kapitał ludzki i innowacje a zmniejszenie luki rozwojowej między krajami [Human capital and innovations and reducing the development gap between countries]. Warszawa: CeDeWu.
- Gierulski, W., Hnydiuk-Stefan, A., Kaczmarska, B., Łobejko, S., Santarek, K., Wiśniewska, J. (2018). Komercjalizacja wyników badań i innowacyjnych rozwiązań w Polsce [Commercialization of research results and innovative solutions in Poland]. Warszawa: Komitet Inżynierii Produkcji PAN. Polskie Towarzystwo Zarządzania Innowacjami.
- Grant, R.M. (2011). *Współczesna analiza strategii* [Contemporary Strategy Analysis]. Warszawa: Oficyna a Wolters Kluwer.
- Griffin, R.W. (2017). *Podstawy zarządzania organizacjami* [Fundamentals of organisation management]. Warszawa: Wydawnictwo Naukowe PWN.
- Janasz, K., Wiśniewska, J. (2017). Aktywność innowacyjna przedsiębiorstw w Polsce [Innovative activity of enterprises in Poland], in: J. Kaczmarek, P. Krzemiński (eds.), Doskonalenie działania przedsiębiorstw i instytucji wobec przemian społeczno-gospodarczych. Innowacje-finanse-otoczenie biznesu (pp. 17-27) [Improving the operation of enterprises and institutions

- in the face of social and economic changes. Innovation-finance-business environment]. Kraków: Fundacja Uniwersytetu Ekonomicznego.
- Janasz, W., Kozioł, K. (2007). *Determinanty działalności innowacyjnej przedsiębiorstw* [Determinants of innovative activity of enterprises]. Warszawa: PWE.
- Janasz, W. (2011). Procesy innowacyjne w przedsiębiorstwie. [Innovative processes in an enterprise], in: S. Marek, M. Białasiewicz (eds.), Podstawy nauki o organizacji. Przedsiębiorstwo jako organizacja gospodarcza (pp. 268-296) [Fundamentals of organisation science. Enterprise as an economic organisation]. Warszawa: PWE.
- Karlik, M. (2013). Zarządzanie innowacjami w przedsiębiorstwie. Poszukiwanie i realizacja nowatorskich projektów [Innovation management in an enterprise. Searching for and implementing innovative projects]. Warszawa: Poltext.
- Knauff, M. (2012). Inwestycje w badania i rozwój: strategiczne współzależności i ich uwarunkowania [Investments in research and development: strategic interdependencies and their determinants]. Warszawa: Oficyna Wydawnicza Szkoła Główna Handlowa.
- Knosala, R., Deptuła, A.M., (2018). Ocena ryzyka wdrażania innowacji [Assessment of the risk of implementing innovations]. Warszawa: PWE.
- Kogabayev, T., Maziliauskas, A. (2017). The definition and classification of innovation. HOLISTICA *Journal of Business and Public Administration*, 8 (1), 59-72.
- Kotler, P. (1994). Marketing: analiza, planowanie, wdrażanie i kontrola [Marketing: Analysis, planning, implementation and control]. Warszawa: Gebethner & Ska.
- Koza, I. (2021). Aspects of the operation of innovative companies on the example of Eastern Poland. Zeszyty Naukowe UPH w Siedlcach. Seria: Administracja i Zarządzanie 128 (55), 11-17.
- Makieła, Z.J. (2018). Przedsiębiorczość i innowacyjność wprowadzenie [Entrepreneurship and innovation introduction], in: Z.J. Makieła, M.M. Stuss (eds.), Przedsiębiorczość i zarządzanie innowacjami. Wiedza, technologia, konkurencja, przedsiębiorstwo (pp. 15-43) [Entrepreneurship and innovation management. Knowledge, technology, competition, enterprise]. Warszawa: C.H.Beck., Warszawa.
- Myjak, T. (2019). Wdrażanie innowacji w procesy personalne organizacji. [Implementing innovations in the organisation's personnel processes], in: R. Knosala (ed.), Inżynieria zarządzania. Cyfryzacja produkcji. Aktualności badawcze 1 (pp. 181-188) [Management Engineering. Digitization of production. Research update 1]. Warszawa: PWE.
- Oslo Manual 2018 (2018). Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition: Downloaded from: https://www.oecd-ilibrary.org/docserver/9789264304604en.pdf?expires=1675159006&id=id&accname=guest&checksum=7967CE77CBF19CDF67145B0A1D45C8DA.
- Penc, J. (1999). *Innowacje i zmiany w firmie* [Innovations and changes in the company]. Warszawa: Placet.
- Pieniacka, E.M. (2016). W kierunku innowacyjności. Istota strategii innowacji. [Towards innovation. The essence of innovation strategy], in: R. Lenart-Gansiniec

- (ed.), *Innowacje w zarządzaniu* (pp. 23-34) [Innovations in management] Warszawa: CeDeWu.
- Pietrasiński, Z. (1971). *Ogólne i psychologiczne zagad*nienia innowacji [General and psychological issues of innovation]. Warszawa: PWN.
- Rogers, E. M. (1983). *Diffusion of Innovations*. Free Press, New York.
- Salavou, H., Baltas, G., Lioukas, S. (2004). Organisational Innovation in SMEs: The Importance of Strategic Orientation and Competitive Structure. *European Journal of Marketing*, 38 (9/10), 1091-1112.
- Singh, S., Aggarwal, Y. (2022). In search of a consensus definition of innovation: a qualitative synthesis of 208 definitions using grounded theory approach. Innovation: *The European Journal of Social Sciences*, 35 (2), 177-195.
- Taylor, S.P. (2017). What is innovation? A study of the definitions, academic models and applicability of innovation to an example of social housing in England. Open Journal of Social Sciences, 5 (11), 128-146.

- Tutaj, J. (2019). Innowacje próba pomiaru. [Innovations an attempt to measure], w: Z. Malara, J. Tutaj (red.), Innowacje a dobrostan społeczeństwa, gospodarki i przedsiębiorstw. Próba pomiaru (pp. 11-26) [Innovations and the well-being of society, economy and enterprises. An attempt to measure]. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
- Wies, S., Moorman, Ch., Chandy, R.K. (2023). Innovation Imprinting: Why Some Firms Beat the Post-IPO Innovation Slump. *Journal of Marketing*, 87 (2), 232-252.
- Zabłocka-Kluczka, A. (2019). Nauka, technika, innowacja problemy semantyczne. [Science, technology, innovation semantic problems], in: Z. Szalbierz (ed.), *Innowacje technologiczne w teorii i praktyce* (pp. 11-45) [Technological innovations in theory and practice]. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
- Żebrowski, M., Waćkowski, K. (2011). Strategiczne zarządzanie innowacjami [Strategic innovation management]. Warszawa: Difin.