

Business insurances as an element of sustainable development of small and medium enterprises in Poland

Natalia Pawlak¹, Piotr Oskar Czechowski^{1,*}, Tomasz Czuba², Aneta Oniszczyk-Jastrzębek², and Artur Badyda³

¹Gdynia Maritime University, Faculty of Entrepreneurship and Quality Science, 81-87 Morska St., 81-225 Gdynia, Poland

²University of Gdańsk, Faculty of Economics, 119/121 Armii Krajowej St., 81-824 Sopot, Poland

³Warsaw University of Technology, Faculty of Building Services, Hydro and Environmental Engineering, 20 Nowowiejska St., 00-653 Warsaw, Poland

Abstract. The SME sector in Poland constitutes over 90% of all business entities. It is a broad market for insurance products. The choice of the insurer by these entrepreneurs is conditioned by several factors, including a beneficial image of the insurer, security in terms of its solvency, an attractive amount of the insurance premium or a wide insurance offer. The data comes from the study "SME finance 2015 - Insurance services market". Two research hypotheses were made for the purposes of the analysis. The first one assumes that the analysed factors are important when choosing the insurer by the SMEs. The second one indicates the selection of an adequate level of protection up to the level of risk occurrence. The results of the research show that PZU SA is the main insurer in Poland. At the same time, it is the most willingly selected SME among enterprises. In addition, two groups of clients were identified. The first one is characterised by the use of adequate protection measures in relation to the degree of risk occurrence. The other group applied relatively high or low degree of protection against small or high risk.

1 Introduction

The market of small and medium-sized enterprises (SMEs) in Poland is rapidly growing. The SME sector is the largest group of business entities that constitute over 90% of all entities in Poland. It translates into the importance of SMEs for the main economic indicator, which is Gross Domestic Product (GDP), as well as the importance of the segment in terms of the unemployment rate. The SME is a generally accepted term in the European Union (EU) countries, also approved by the United Nations (UN), World Trade Organization (WTO) and the World Bank. The sector is supported by separate provisions of commercial law, as it provides a source of income for the middle class. It is also believed that countries supporting

* Corresponding author: oskar.czechowski@ibs24.eu

the free market, and in particular enabling the development of the middle class, achieve a higher level in economic and civilisation development.

Considering the wide market of insurance products, the SMEs are also a particularly important sector of enterprises for the insurers. However, when it comes to choosing an insurer, the entrepreneur is the policy maker. Therefore, from the point of view of the insurer, it is so important, based on the results of the research, to select the appropriate tools and establish long-term relationships with clients.

This research is focused on the assessment of behaviour of entrepreneurs in the SME sector as regards the choice of the insurer and indicates the state of entrepreneurs' awareness of the insurance risk closely related to the purchase of insurance products. The research problem is based on an attempt to assess what factors mostly determine the choice of the insurer among enterprises in the SME sector. It also applies to the respondents' behaviour in relation to a strong or low risk connected with specific random events in the context of implementation of the sustainable development concept, which results in increased efficiency and productivity of production, ensuring security, increase in prosperity, stabilising the financial situation, as well as increasing work safety and social security. The study encompassed the following factors:

- reputation, favourable image, experience;
- security / solvency;
- wide insurance offer / wide range of risk;
- attachment, continuation of insurance;
- favourable premium amount;
- speed of claims settlement;
- agents' activity / competence: agent's visit / call;
- flexibility / individual approach to the client;
- package insurance offer (special additional offer);
- possession of individual insurance.

The first research hypothesis is based on the abovementioned factors and indicates that all these factors affect the choice of the insurer among enterprises in the SME sector. The second hypothesis states that if there is a significant risk as to the occurrence of a fortuitous event, the insured will select an adequate type of protection against the effects of such occurrence.

The results of the research are presented in form of two-dimensional graphs and charts. The study has been conducted with the use of the correspondence analysis model, based on the relations between variables, expressed on a weak measurement scale (nominal and ordinal).

2 The evolution and essence of the insurance market

The development of the insurance trade over the centuries depended mainly on people's needs and risk awareness. Risk assessment is directly related to limiting or completely eliminating its effects. First attempts of risk assessment date back to the ancient times, when people gathered in herds and changed their place of settlement quite frequently, forced by natural conditions. The literature does not record any point in history that would clearly indicate the beginning of insurance. Possible dates are conventionally accepted [1]. The beginnings of proper forms of insurance were recorded in the Code of Hammurabi, created in the 18th century BC in Babylon – insurance took the form of a commercial contract and concerned trading. The second more popular form was an insurance loan occurring in India – in case of going on a dangerous journey, the debtor took a higher-interest loan than other debtors [2]. The maritime loan was also known in Greece – it was used until the year 1200,

later it was replaced by a fictitious purchase contract. The system of protection against the consequences of possible losses in maritime shipping, called “*koionia*” was another insurance tool developed in Greece, while in the Roman Empire, the “*foenus naticum, lex Rhodnia de iactu*” rule was applied, with the purpose of transferring or distributing such losses [3]. Over the time, the fictitious sale contract has turned into an insurance policy [4]. In the Middle Ages, the term of insurance broker appeared, referring to insurance product stakeholders. In the 15th century, the Barcelona ordinance was created, which was the first document constituting the law of protection. One of the first insurance companies was founded in Paris in 1668. In the 17th century, first insurance exchanges were launched. Subsequent forms of insurance were mainly related to the development of rail and vehicle transport. Even today, civil liability insurance for motor vehicles is obligatory in Poland [5].

The analysis of historic and current forms of insurance indicates that the guiding principle of all insurance – regardless of the degree of complexity – is the awareness that common burden or responsibility for the occurrence of negative effects of random events is much more advantageous for individuals. Due to these strong needs and gathering in larger communities, the insurance industry has not faced any crises in its history, while all slowdowns that occurred were only related with the macroeconomic factors that had a negative impact on the sales of insurance products [1].

On the insurance services market, the use of an appropriate distribution policy affects the perception of insurance companies and the services they offer. The possibility to buy insurance in the Internet also contributes to that. The development of information technologies causes that the methods of selling insurance products evolve. As a result of this evolution, new solutions are created, defined by non-traditional distribution channels [6]. According to J. Gwizdała: “New distribution channels for insurance products are created at the level of marketing department and the sales network of the insurance company” [7].

Currently, the industry is developing through the reproduction of banking solutions. One of the latest reports of 2015 indicates the possibilities of using the Internet channels to adapt the insurance offer and increase the sales of insurance products among the Y generation that seeks total autonomy in decision-making, which leads to distinguishing the trend of creating e-services in the insurance sector. Both insurance brokers and agents offer the possibility of calculating insurance premiums using the Internet [8].

Future insurance products should encompass protection against activities related with the technology industry (cybercrime) and should also be distributed using the channels that generate them. Well-established banking solutions are also copied (e.g. mobile applications) [9]. The factor that can probably have a significant impact on the development of insurance is the role of mobile phone operators that currently sell insurance products via the Internet [10].

3 Economic insurance vs. sustainable development of small and medium enterprises

Sustainable development was defined in 1987 in the Brundlandt Report of the UN World Commission on Environment and Development, “Our Common Future”, as a progress that meets the current needs of society without diminishing development opportunities for future generations [11, 12]. It entails a number of principles that affect the activities of enterprises, but should also meet the current needs without affecting the ability to satisfy the needs of future generations, combining the pursuit of economic prosperity, environmental protection and social equality [13]. According to T. Toczyński et al. sustainable development means socio-economic development, in which the process of integrating political, economic and social activities takes place, preserving the environmental balance and sustainability of natural processes [14]. Similar observations are made by S. Baker, who points out the

connection of sustainable development with all activities related to economic growth, multi-sectoral policy, food security, as well as searching for global solutions to environmental problems [15].

Art. 3 item 50 of the Act of 27 April 2001 "Environmental Protection Law", defines sustainable development as: "(...) socio-economic development, in which the process of integrating political, economic and social activities takes place, preserving the natural balance and sustainability of basic natural processes, in order to guarantee the ability to satisfy the basic needs of individual communities or citizens, both of the contemporary and future generations" [16]. The model of sustainable development assumes that there is a balance between three equal components: economic, ecological and social, that interact with each other. [17]. It should be emphasised that the implementation of sustainable development is conditioned by social, economic, organisational, legal and nature-related factors. Thus, permanent and sustainable development would not be possible without ensuring the stability of operation of business entities. Therefore, an important role in ensuring sustainable development is attributed to insurance protection [18].

Economic insurance is designed to cover future property needs, induced in individual units by certain random events characterised by a certain regularity, by spreading this coverage on many units threatened by the same random events [18]. Random events bring economic, social and environmental losses, which significantly affect sustainable development. So the tools that compensate for the damage are important. Therefore, risk management in an enterprise includes the process of protecting assets against damage or loss as a result of random events, including weather. The most common way to deal with this type of risk is to conclude a property insurance contract, where meteorological phenomena are treated equally to random events to which business entities are exposed [19, 20].

Economic insurance may have a positive impact on selected indicators of sustainable development, taking into account its constituents (i.e. social, economic, environmental and institutional-political order). Thus, insurance guarantees social order by: providing income to enterprises, as well as people from other branches of economy cooperating with these enterprises, providing own income, guaranteeing income regardless of fortuitous events and providing basic livelihoods - without having to change the job or dismiss employees. The economic order is possible primarily due to maintenance of production. Environmental order is connected with ensuring stable functioning of the entity in the long run, while institutional and political order is based on increasing the level of trust in public institutions. The fact is that the direct purpose of business insurance is to reduce uncertainty in management and to increase income stabilisation. But it is also worth stressing that thanks to full insurance protection, producers have greater access to the financial sector, which strengthens the mechanisms of sustainable development, guaranteeing the possibility to satisfy their needs both today and in the future [18].

4 Methodology

The subject of the study is a representative statistical sample - 1,100 entrepreneurs from the SME sector in Poland, of which micro enterprises constituted 54.5%, small enterprises 27.3% and medium-sized enterprises 18.2% [21]. The main objective of the survey, conducted in 2015, was to indicate the factors that had a significant impact on the insurer choice among the Polish entrepreneurs and to assess the perception of risk among the enterprises in the SME sector. The reason for the selection of the analysed sector is the fact that institutional clients (SME enterprises) are more aware of insurance products than individual clients, who almost exclusively associate insurance with vehicle insurance. The research problems concerned a group of factors that may or may not affect the choice of the insurer among the enterprises in the SME sector, and also refer to respondents' behaviour in relation to a strong

or low risk connected with specific random events. The factors selected in the study are listed in the introduction, while the random events indicated in the questionnaire included:

- fire,
- flood,
- flooding (from water and sewage facilities),
- other elements,
- thefts made by employees,
- theft by other people / vandalism,
- property destruction,
- inflicting damage on someone,
- interruptions in the company's operations (e.g. disruptions in energy supply, breakdowns, etc.),
- debtors' insolvency, possession of debts,
- illness / death of the owner / partner.

The data for the study were collected using the PAPI method (Paper & Pen Personal Interview) in 2015 by Qualifact research agency. The PAPI method is based on an interview with a respondent who answers questions asked by the interviewer. The questions are included in a questionnaire form in which the interviewer can quickly and comprehensively record the answers received. The PAPI method is used in "[...] quantitative market and public opinion surveys" [21]. The main objective of this study was to identify the attitudes of entrepreneurs in the SME sector in the insurance market, and survey participants were persons responsible for choosing an insurer for their company. The study covered of the entire area of Poland. The largest number of enterprises (around 180) were located in the Mazowieckie Voivodeship, mainly due to the fact that most companies had their offices in Warsaw. Slightly less, around 140 enterprises were located in the Silesian Voivodeship, where mining industry (mainly coal) is still active. Over 100 SMEs had their registered offices in the Wielkopolskie Voivodeship, as the mission of Poznań, which is the major city of that region, is focused on development of innovation and providing new jobs, mainly for young people.

In order to verify the hypotheses, the selected models were used, depending on the measurement scales of researched empirical stochastic and exploratory variables and assumptions. Among the key models, the following should be mentioned: simple models of the ANOVA family, correspondence analysis (CA) models, as well as advanced generalised regression models (GRM). The obtained results fully addressed all of the research goals, while the cognitive value gained in the process proved to be useful in a practical dimension.

5 Correspondence analysis model results

Correspondence analysis (CA) or reciprocal averaging is a multivariate statistical technique proposed by Herman Otto Hartley (Hirschfeld) and later developed by Jean-Paul Benzécri [22, 23]. It is conceptually similar to principal component analysis (PCA), but applies to categorical rather than continuous data. In a similar manner to principal component analysis, it provides a means of displaying or summarising a set of data in two-dimensional graphical form.

All data should be nonnegative and on the same scale for CA to be applicable, keeping in mind that the method treats rows and columns equivalently. It is traditionally applied to contingency tables — CA decomposes the chi-squared statistic associated with this table into orthogonal factors. Because CA is a descriptive technique, it can be applied to tables whether or not the CHI2 statistic is appropriate.

The majority of SMEs, 480 entities - 44%, chose PZU SA as their main insurer. Among these companies, 226 were micro enterprises, 147 were small enterprises, and 107 were medium-sized enterprises. The second most frequently selected insurer was Warta SA. Thirty entrepreneurs chose this company, most of which were micro-entrepreneurs (around 50 companies), followed by 30 small entities and around 20 medium-sized enterprises. Additionally, the surveyed SMEs indicated three other insurers: Compensa SA, Ergo Hestia SA and Generali SA. Among these insurers, Ergo Hestia SA was most popular - it was chosen by around 90 entrepreneurs. Compensa SA was selected by around 70, whereas Generali SA by around 50 entrepreneurs. However, over 150 respondents did not specify the main insurers of their enterprises. Other insurers still remain the background for the main players on the insurance market.

In the selection of the insurer by the SME sector companies, four factors are mainly distinguished (Fig. 1.). The most important is the sense of security, determined mainly by the solvency of the insurer - 16.72% of the replies. It is followed by favourable amount of contribution - 15.95% (probably the surveyed defined it as the ratio of the premium price and the quality of services provided as part of the insurance plan). Other important factors were: wide insurance offer, which covers a wide range of risks (14.23%) and the reputation and favourable image of the insurer, supported by many years of experience in the industry (13.96%). These factors should be as high as possible because they shape the overall image of insurance companies. It must be noted that the assessment of the quality of the offered insurance service is a subjective assessment of the client, therefore customers may evaluate the same level of quality in a different way [24]. In addition, less significant, but still determining factors include: the speed of claims settlement (9.83%), attachment, continuation of insurance (7.96%), package insurance offer (6.24%). The least important factors in the choice of the insurer are: flexibility, individual approach to the client (4.55%) and possession of individual insurance (3.02%).

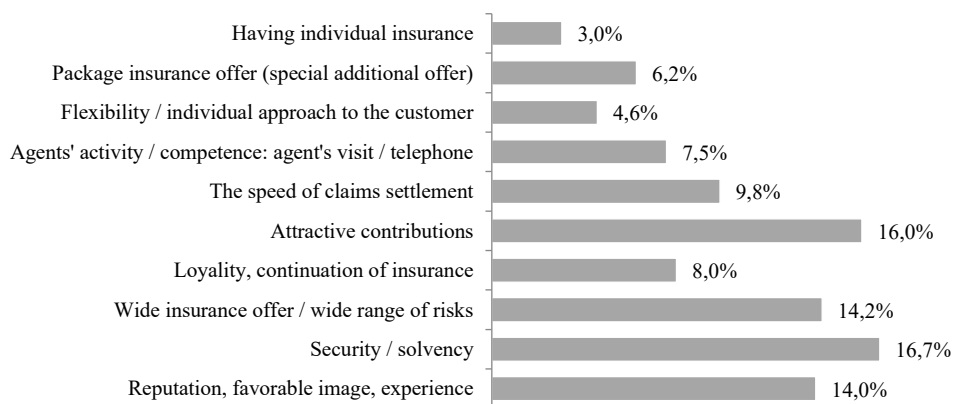


Fig. 1. Insurer selection factors indicated by enterprises in the SME sector.

The relationship between the degree of risk severity and the degree of security is usually directly proportional (Fig. 2.). According to J. Pawłowska-Tyszko, business insurance is able to minimise the risk in financial terms, both for the state and for the insured persons [25]. The participants of the described research claim that if the risk of theft by employees is low, no extraordinary measures should be taken to prevent such undesirable actions. Moreover, when the occurrence of such actions in enterprises is connected with relatively high risk, then protection against such incidents should be appropriately increased. The perception of risk

by the SMEs is therefore correct and does not depart from the standards generally accepted by the society.

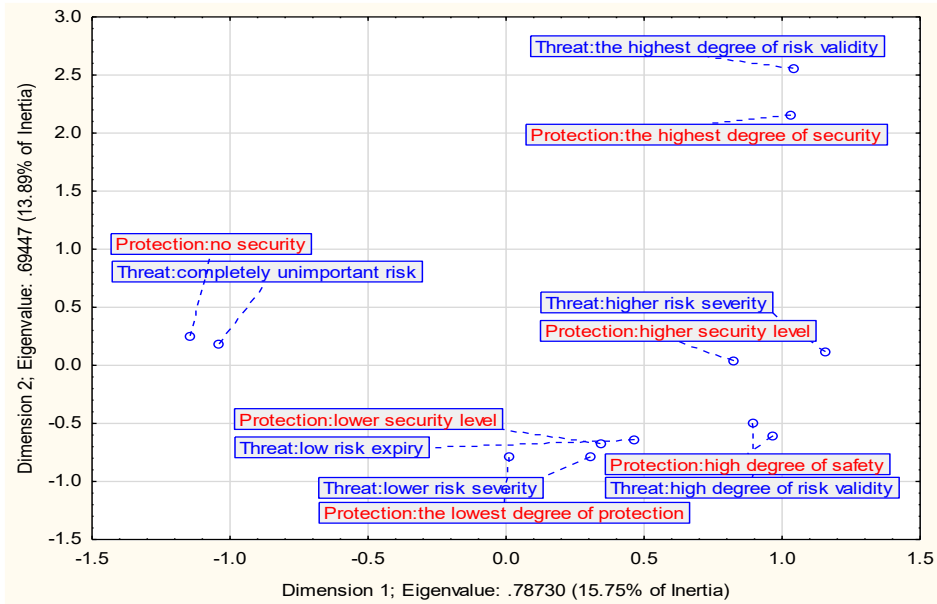


Fig. 2. The relationship between risk occurrence (Protection) and the severity of the threat of theft by employees.

The aspect of flooding (caused by water and sewage facilities) indicates different and quite surprising relations between risk and the degree of protection (Fig.3.).

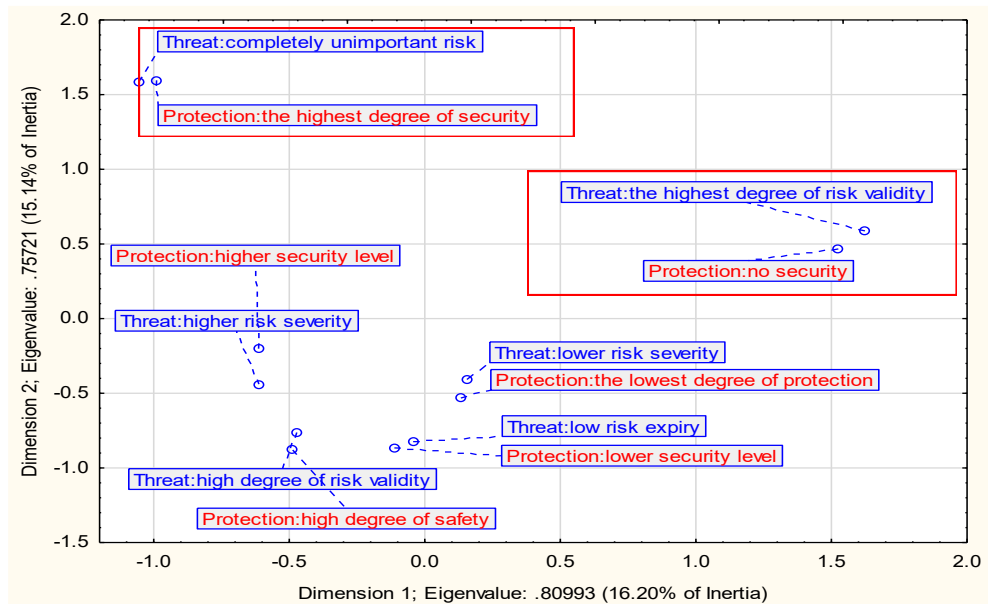


Fig. 3. Relationship between the degree of risk occurrence and the degree of risk of flooding (caused by water and sewage facilities).

Two groups of respondents were distinguished. One was characterised by direct proportionality of risk and its counteraction. The other was its contrast: high degree of protection against flooding was selected if there was low risk of flooding and low degree of protection was applied if there was high risk of flooding.

6. Conclusions

SMEs constitute an important business sector in Poland, just as in the rest of the world. Their development significantly contributes to the economic and civilisation growth. It is also an important market for the insurance segment in terms of insurance products sales. Currently, the choice of insurer is conditioned by many factors, and the company itself is the main decision-maker.

As a result of the study, three groups of factors have been identified that affect the choice of the insurer by enterprises in the SME sector. The first group, with the strongest impact, included:

1. a sense of security, mainly determined by the solvency of the insurer (16.72% of replies),
2. favourable amount of the insurance premium (15.95%),
3. wide insurance offer that covers a wide range of risk (14.23%),
4. reputation and favourable image of the insurer, supported by many years of experience in the industry (13.96%).

The second group of factors, with slightly weaker but still significant impact on the choice of the insurer, included:

1. speed of claim settlement (9.83%),
2. attachment, continuation of insurance (7.96%),
3. package insurance offer (6.24%).

The last group of factors, characterised by the weakest effect on the choice of the insurer, included:

1. flexibility, individual approach to the client (4.55%),
2. possession of individual insurance (3.02%).

In addition, two groups were indicated as a result of the correspondence analysis. The first was characterised by the use of rational - directly proportional protection measures in relation to the risk occurrence degree.

The other group applied high or low degree of protection against low and high risks, respectively.

The research results fully confirm the first assumption presented in the introduction. The second assumption was only partially confirmed. It states that if there is a significant risk as to the occurrence of a fortuitous event, the insured will select an adequate type of protection against the effects of such event. Therefore, the first distinguished group confirmed that assumption, while the other group did not. Beside that, PZU SA was most frequently indicated as the main insurer selected by the SMEs. Based on the analysed factors, the respondents indicated that it was a reliable supplier of insurance products and claims settlement.

In view of these research results, it can be assumed that market activities of insurers may disturb the perception of needs among entrepreneurs and result in inadequate risk assessment by the survey participants. Additionally, insurers, in order to be able to develop further, should build long-term relationships with clients. Consequently, the SMEs should be considered a customer segment for insurers, due to their growing participation in the enterprise market.

The role of insurers in the sustainable development concept should be to secure citizens property against random events, primarily by offering generally available insurance,

unification of market rules and organisation of claims settlement, dissemination of insurance policies among property owners and also cooperation with the government to ensure fast and effective settlement of damages and efficient use of State compensation guarantees [19].

References

1. P. Różycki, *Zarys historii ubezpieczeń*, [in:] M. Iwanicz-Drozdowska, *Ubezpieczenia* (PWE, Warszawa, 2013)
2. https://piu.org.pl/public/upload/ibrowser/historia_ubezpieczen_na_swiecie_i_w_polsce.pdf
3. T. Michalski, R. Pajewska, *Ubezpieczenia gospodarcze* (WSiP, Warszawa, 2001)
4. T. Sangowski, *Historia ubezpieczeń gospodarczych w zarysie*, [in:] A. Gawroński, *Vademecum ubezpieczeń gospodarczych (pośrednika ubezpieczeniowego)* (Saga Printing, Poznań, 1998)
5. W.M. Mellert, *Marine Insurance* (Swiss Re, Zurich, 2003)
6. A. Oniszcuk-Jastrzębek, T. Czuba, A. Borodo, **14**, 260-273 (2017)
7. J. Gwizdała, *Wiadomości Ubezpieczeniowe* **3**, 124 (2010)
8. <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/06/pl-Raport-KPMG-Ubezpieczenia-w-zasiegu-reki.pdf>
9. <http://www.rp.pl/Ubezpieczenia/303189847-Jaka-przyszlosc-ubezpieczen.html>
10. <https://bergsystem.pl/blog/wyzwania-branzy-ubezpieczen-na-2018-rok-oddajmy-glos-ekspertom/>
11. B.A. Larson, *Sustainable Development Research Advances* (Nova Science Publishers, 2007)
12. T.H. Reis, *Compensation for Environmental Damages under International Law* (Netherlands: Wolters Kluwer, 2011)
13. M. Pigłowski, *Współczesne uwarunkowanie rozwoju zrównoważonego*, [in:] *Uwarunkowania rozwoju przedsiębiorczości. Determinanty i narzędzia zdobywania przewagi konkurencyjnej*. Ed. H.G. Adamkiewicz-Drwilło (PWN, Warszawa, 2007)
14. T. Toczyński, W. Wrzaszcz, J.S. Zegar, *Zrównoważenie polskiego rolnictwa w świetle danych statystyki publicznej*, [in:] Zegar J.S. (red.), *Z badań nad rolnictwem społecznie zrównoważonym* (IERiGŻ-PIB, Warszawa, 2009)
15. S. Baker, *Sustainable Development* (Routledge, New York, 2006)
16. Ustawa z dnia 27 kwietnia 2001 roku o wprowadzeniu ustawy – Prawo ochrony środowiska, ustawy o odpadach oraz zmianie niektórych ustaw, DzU, 2001, nr 100, poz. 1085, z póź. zm.
17. H. Kruk, *Konkurencyjność przedsiębiorstw w świetle zasad rozwoju zrównoważonego*, [in:] *Przedsiębiorstwo w otoczeniu globalnym*. Eds. O. Dębicka, A. Oniszcuk-Jastrzębek, T. Gutowski, J. Winiarski (UG, Gdańsk, 2009)
18. A. Kurdyś-Kujawska, *Ubezpieczenia gospodarcze jako czynnik zapewniający zrównoważony rozwój gospodarstw rolnych* [in:] *Rachunkowość na rzecz*

- zrównoważonego rozwoju. Gospodarka – etyka – środowisko*. Ed. E. Kożuchowska, **436**, 22 (Wrocław, 2016)
19. D. Michałak, *Ekonomia i Środowisko*, **52** (2015)
 20. T. Kaniewski, *Możliwość zabezpieczenia ryzyk pogodowych*, [in:]: D. Walczak (red.), *Ubezpieczenia w zarządzaniu ryzykiem* (Toruń, 2010)
 21. Qualifact. *Badania rynkowe i doradztwo*, Report: Finanse MSP 2014. Rynek usług ubezpieczeniowych (Gdańsk, 2015).
 22. P.O. Czechowski, A. Oniszczyk-Jastrząbek, T. Czuba, *Eco-driving: behavioural pattern change in Polish passenger vehicle drivers* (EDP Sciences (28), 2018)
 23. W. Rogula-Kozłowska, G. Majewski, P.O. Czechowski, *Environ Monit Assess* 187-240, (2015) <https://doi.org/10.1007/s10661-015-4450-5>
 24. A. Oniszczyk-Jastrząbek, T. Czuba, *Marketing i Zarządzanie* **48** (2017).
 25. J. Pawłowska-Tyszko, M. Soliwoda, S. Pieńkowska-Kamieniecka, D. Walczak, *Stan obecny i perspektywy rozwoju systemu podatkowego i ubezpieczeniowego polskiego rolnictwa* (Wyd. IERiGŻ – PIB, Warszawa, 2015)