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INSURANCE METHODS OF FINANCING THE REALISATION OF ENVIRONMENTAL RISK OF ENTERPRISES IN POLAND

Summary

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1. Introduction

The observed negative impact of human activity on the environment, including, above all, a significant loss of biodiversity, prompted the European Union to take action to provide appropriate incentives and safeguards to prevent damage to the environment. In order to eliminate differences in national legal systems defining liability for environmental pollution, in 2004 the European Union implemented Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage. It allowed for the creation of a uniform and comprehensive system of liability for environmental damage, based mainly on the 'polluter pays' principle, according to which the legal and economic consequences of pollution are borne by its perpetrator. Together with the precautionary principle, the principle of preventive action and the principle of removing pollution at source, it forms the basis of the European Union's environmental policy to create green economies, protect nature and ensure the health and quality of life of its citizens.

The implementation of the above directive and its national equivalent – the Act of 13 April 2007 on the prevention of environmental damage and its repair, increased the legal liability of entities using the environment, requiring them to take preventive action in the event of an imminent threat of environmental damage and remedial action in the event of occurrence of environmental damage. According to EU data, the number and extent of damages to the environment is so large that their occurrence may significantly affect the financial situation of a company, even leading to its bankruptcy.

More restrictive legal provisions in the field of environmental liability of enterprises have made the author take an innovative approach to the issues of risk associated with conducting business activity in relation to the prevention and remedying of environmental damage. The optics adopted in this monograph, which is part of the constructivist approach to the concept

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of 'risk', according to which a given entity—the 'owner of risk'—perceives and creates it in an individual way, is a kind of break from the objectivity of exact sciences in favour of the subjective social science.

Due to the complex nature of the environmental risk, as well as the insufficiency and sometimes unreliability of using only physical control methods, other methods of financing the realisation of environmental risk in enterprises are sought. Taking into account the criterion of the origin of funds used for financing the costs related to environmental damage, the general classification divides them into insurance and non-insurance methods. It is assumed that insurance market solutions are more effective and fulfil the role of primary financing tools to a greater extent, which boils down to taking over the financial consequences of environmental pollution liability from its perpetrator. In addition, insurance instruments should be treated as tools aimed at achieving sustainable development with respect for the natural environment, thanks to a thorough procedure for environmental risk assessment as well as financing preventive and remedial actions. This is of key importance in the face of difficult economic and social conditions caused, among other things, by the COVID-19 pandemic. The pandemic has definitely moved us away from creating circular economies, generating huge amounts of waste, for example, in the form of used personal protective equipment. Recent data show that the potential to reduce greenhouse gas emissions caused by the isolation and closure of many businesses, and the subsequent opportunity to rebuild economies and societies in a sustainable way, is still wasted in many countries.

2. Aim

This monograph serves as a voice in the scientific and social discussion on the recognition of environmental risk and its control tools in enterprises operating in Poland. Its aim is to solve the following research problem: by what and how is environmental risk conditioned and what determines its perception in enterprises operating in selected industries in Poland, as well as what insurance methods are used for financing its occurrence.

The aim of the publication is to define the conditions of the environmental risk of enterprises and the determinants of its perception, and to characterise the insurance methods of financing its occurrence.

3. Methodology

The legal status as at 31 March 2022 was adopted for the analysis of legal liability related to environmental damage. A similar time range was adopted for the analysis of insurance products. The empirical study was carried out in 2015 with regard to enterprises operating on the domestic market, and the analysed damage data obtained from the General Directorate for Environmental Protection (GDOŚ) come from August 2017. The territorial scope of the monograph refers mainly to the territory of Poland, although when analysing the legal liability for environmental damage, the EU legislation was used.

The data used in the monograph come, among others, from a study conducted with the use of deductive reasoning based on the analysis of domestic and foreign literature as well as legal acts in the field of environmental protection and damage to the environment. The examined literature was devoted to topics related to risk, including mainly the constructivist theory, the state's environmental policy, corporate social responsibility, environmental management systems and insurance, including environmental insurance. Another task carried out within the publication was an empirical study using the computer-assisted telephone interviewing (CATI) method, used for collecting information in quantitative market research and public opinion research by means of a telephone interview. The objects of the study were enterprises operating in Poland in the following five industries: food, energy and heating, the chemical

industry, raw materials and fuels, transport and logistics. The subject of the study was the perception and identification of environmental risk by enterprises, including the recognition of the effects it may have (mainly in the economic and social dimension) for their operations and the use of the methods of financing the realisation of this risk by these enterprises. For this purpose, a questionnaire was constructed based on the FERMA (Federation of European Risk Associations) study report on environmental risk management in Europe and divided into three stages corresponding to individual research areas. The author also analysed the data contained in the register of direct threats of damage and damage to the environment and in the register of historical pollution of the earth's surface obtained from GDOŚ. Next, a comparative method was used in order to assess the possible implementation of environmental insurance offered on the Polish market.

4. Research results and conclusions

On the basis of the conducted analyses, it was found that the negative impact of the company on the environment may be the result of such events as a fire, breakdown, road accident or error in the operation of machinery, all of which lead to the emission of pollutants into the environment. This impact is treated in the monograph as a source of environmental risk for the company. It is understood in a different way than in classical literature sources—as a future, possible and unacceptable condition, the occurrence of which means the violation or loss of the positive value of an entity (enterprise). It is very important that risk is defined through the prism of this entity—its owner, and thus using the subject-centred concept of risk.

The basic assumption in the monograph, which was verified in the conducted analysis, indicates that an enterprise defines its environmental risk based on its goals and taking into account its own interests. The basis for the discussion on the environmental risk of an enterprise is a set of its determinants, i.e. external factors that create space – background for its creation. The analysis carried out in Chapter 2 made it possible to formulate the following conclusions:

- Legal regulations regarding environmental protection, including, above all, legal liability for damage caused to the environment, constitute the main determinant of environmental risk for enterprises. The analysed EU and national legislation, currently based on the 'polluter pays' principle, is the basis for defining environmental risk by enterprises. Yet most importantly, it obliges them to bear financial responsibility for preventive and remedial actions in the event of an imminent threat of damage to the environment or actual occurrence of environmental damage. From the point of view of risk as a construct, the basis for calling a given event the environmental risk of an enterprise is the occurrence of an unacceptable condition for the enterprise (economic, social, image-related, etc.) resulting from its negative impact on the environment.
- It is the state's task to create legal and economic solutions conducive to the country's economic development, while supporting activities desirable from the point of view of respecting the principle of sustainable development. Among the tasks planned as part of the state environmental policy, the following may be mentioned: support for the implementation of projects related to the protection of the environment and biodiversity, co-financing the construction of systems for warning and responding to environmental threats, as well as building a system of legal and financial solutions for the implementation of environmental management systems in organisations (e.g. EMAS). They are intended to make economic entities aware of the importance of environmental protection issues. As a consequence, this gives an additional incentive to shape the image of environmental risk in an enterprise.
- Growing ecological awareness of the society, including the change in consumption habits and the dependence of product choices on whether a given enterprise takes into account

the environmental aspects and prevents negative environmental impact in its operations, is another external factor that determines the concept of the environmental risk of an enterprise. As shown in this monograph, more than half of the Polish population believe that actions in the field of environmental protection taken at the level of citizens, enterprises, state authorities and the entire European Union are insufficient. Social pressure, supported by competition, motivates companies, including mainly production companies, to take into account environmental issues and analyse the impact of their activities on the environment. Therefore, also in this area of the enterprise's activity, situations that are unacceptable to it may occur and may further specify the image of environmental risk for the enterprise.

- Running any business activity involves the need to obtain the necessary financial resources, which can come from various sources. Capital providers, including shareholders and financial institutions, increasingly make their decisions regarding the financing of a given entity or investment dependent on the environmental dimension of its operations. The research results analysed in this monograph indicate the growing importance of socially responsible investments in European countries. Therefore, the policy of capital providers regarding the financing of entities or projects whose activities may have a negative impact on the environment has an impact on the environmental risk of enterprises.

The identified selected environmental risk determinants of an enterprise are objective in nature, i.e. they equally apply to all entities present on a given market. The applicable law, state environmental policy and specific consumer attitudes apply to all entities that may have an impact on the environment. However, how a given enterprise, based on the above-mentioned conditions, perceives and defines the environmental risk related to its activity depends on the internal features and characteristics of the organisation. On the basis of the analysis carried out in Chapter 3, selected determinants of the perception of the enterprise's environmental risk were determined. The conclusions are as follows:

- Individual understanding of the essence of legal liability, which has increased significantly due to the implementation of the Directive on environmental liability and the Act on the prevention of damage, influences the definition of environmental risk in a given enterprise. The awareness of the type and scale of the consequences of causing damage to the environment determines the image of this risk. The study shows that there is a relationship between the degree of knowledge of the Act on the prevention of damage and certain actions taken to identify environmental risk in an enterprise.
- The nature of the business activity, procedures applied in the event of pollutant emissions and employee training in this area are all important in the process of shaping the environmental risk of a given enterprise. The obligations to act, analysed in this monograph, imposed on enterprises whose activities may cause environmental pollution or damage, including high-risk and increased-risk plants, have a significant impact on the level of acceptability of environmental risk in an enterprise.
- The perception of environmental risk, including the determination of the future and unacceptable condition, is affected by the application of a specific (active or passive) pro-ecological policy and activity in the field of environmental protection. The above is usually related to the fact that a given entity is guided by socially significant values, such as limiting a negative, harmful impact on the environment or ecology. Awareness of the benefits of implementing the concept of Ecological Corporate Social Responsibility (ECSR) (defined in point 3.3.3), including, among other things, fulfilment of obligations arising from the law (formal and legal actions) and practices preventing damage to the

environment (investment and infrastructural actions), applied by both the management and employees of an enterprise, affects the subjective perception of the frequency of specific negative events in the environment. It means that the above factors also determine the environmental risk image of enterprises.

- The knowledge and experience gained by an organisation both at the stage of implementation and control of already implemented environmental risk management systems, compliant with the ISO 14001 standard or the EMAS regulation, are important for constructing the environmental risk of a given enterprise. Based on the literature research, it may be concluded that organisations with standardised environmental management systems are better able to assess and identify hazards which may contribute to the occurrence of environmental risk in an enterprise.
- A very important element influencing the perception of environmental risk by a given enterprise is the experience of environmental damage. Specific actions taken by the organisation in this situation, the costs incurred for remedial actions and the fulfilment of the damage-related obligations imposed by an administrative decision make it necessary for a given enterprise to define the limits of acceptability of a given risk. Based on the data obtained from GDOŚ, it appears that the largest number of damage events occur in the case of activities consisting in the sale of fuels at petrol stations (raw materials and fuels industry). Such aspects as the knowledge of the number of incidents, the extent of the effects of environmental pollution, including the costs of preventive or remedial actions and the time needed to 'repair' the environment affect the perception of the environmental risk of an enterprise. This determinant is strongly related to the awareness of legal regulations, as it is proof of law enforcement by the state and legal responsibility of the perpetrators of environmental damage.
- Although socio-cultural conditions are an external factor to the enterprise, they shape the behaviour of a given organisation and cause it to adopt specific attitudes and values characteristic of the society or culture in which it operates. Depending on whether the enterprise faces strong pressure from its environment, which demands compliance with the standards and principles aimed at protecting the environment, or with tacit acceptance of anti-environmental practices, it takes into account or not certain aspects affecting the definition of its environmental risk. Literature studies in this area allow us to draw conclusions about a significantly higher involvement in environmental issues of the European enterprises than those operating in developing countries.

The analysis of data on damage events carried out in Chapter 3 leads to the conclusion that the issue of environmental damage is largely related to the activities of Polish enterprises. In Poland, in the years 2007–2013, over 40% of all environmental incidents considered according to the Directive on environmental liability in the entire European Union were reported. In addition, administrative authorities issued many decisions that imposed on the polluters the obligation to take remedial or preventive measures, and thus the need to bear the costs of such actions. The results of the author's own study indicate that this area of environmental risk is the most important for enterprises (regardless of the industry). Due to the specificity and characteristics of environmental risk specified in Chapter 1, and sometimes the unreliability of physical control methods, the above raises the need to use mechanisms for financing the occurrence of environmental risk by enterprises. A special role in this process is played by insurance methods, which is demonstrated in this work. Conclusions regarding the insurance methods used for financing the management of environmental risk in enterprises can be formulated in the following points.

- Insurance coverage in terms of compensating for the negative financial consequences of the environmental risk of enterprises is provided under traditional insurance contracts (usually as an extension of the third-party liability insurance for the conducted activity and owned property), specialised environmental insurance contracts or occasionally their derivative forms, as well as through insurance guarantees. Following both literature analysis and the author's research, traditional insurance methods are still more popular among Polish enterprises, mainly in the form of an environmental clause attached to the third-party liability insurance for the conducted activity and owned property.
- A comparative analysis of the general insurance conditions and the requirements of the Directive on environmental liability and the Act on the prevention of damage indicates a wider scope and subject of insurance coverage offered under environmental insurance than in the case of the environmental clause. Consequently, it is more suited to the needs of entrepreneurs whose legal liability for environmental damage has been extended by the above-mentioned Directive and Act. This applies primarily to administrative liability, including damage to biodiversity, as well as coverage of costs related to minimising damage or interruption of operations.
- The environmental insurance market in Poland is still young and relatively small, yet it is developing dynamically. The analysis shows that only three insurance companies, including two foreign branches, offer specialised stand-alone environmental insurance.
- Environmental insurance, apart from ensuring the reality of compensation for environmental damage and financing of preventive actions, is primarily intended to protect enterprises (by guaranteeing their liquidity) in the event of an unacceptable condition, i.e. environmental risk. Environmental insurance is also an expression of a conscious approach to risk by enterprises whose activities have an impact on the environment, and may, in a sense, fulfil the principles stemming from the policy of socially responsible business, and thus also sustainable development.

Furthermore, the results of the author's research indicate high activity of Polish enterprises in the field of environmental risk management, as well as initiatives taken to protect or improve the condition of the environment in Poland. The surveyed enterprises assess the environmental risk in their operations, including its impact on the natural environment, which should be regarded as positive. At the same time, according to the author's research, most activities in this area are undertaken by chemical industry enterprises. In fact, the author points to the relationship between the knowledge of the Act on preventing damage and taking actions aimed at identifying and assessing environmental risk, including the implementation of an environmental risk management system. This may be due to the fact that the legal conditions of the business activity are taken into account in the risk assessment process. From the point of view of the objectives of the Directive on environmental liability and the Act on preventing damage, the methods of physical control (preventive tools) used by enterprises, aimed at minimising the likelihood of environmental damage or limiting the effects of its occurrence, should be assessed positively. However, due to the fact that restoring the environment to its pre-damage condition is an extremely complex process and can take years, and the costs of expert opinions, environmental repair and monitoring of its condition after the damage are very high, enterprises should consider using insurance methods of financing occurrence of environmental risk. Unfortunately, following the author's research, only slightly more than 21% of the enterprises under analysis use or plan to purchase an environmental insurance contract. The reason for the low interest in environmental insurance among the surveyed enterprises may be insufficient knowledge about this product and the possibilities of its use (a small number of insurance companies offer such a solution). It has been shown

that there is a relationship between the choice of this type of insurance and incurring the costs of preventive actions as well as using the services of an insurance broker.

A detailed analysis of selected aspects of environmental risk in enterprises and the characteristics of insurance methods of financing its realisation provide arguments for the implementation of such solutions as generally applicable. The insurance products available today not only allow compensation for environmental damage, but above all protect the property interest of the insured. Determining selected environmental risk factors for enterprises allows insurance companies to adjust the offer and conditions of insurance cover to the needs of the demand side of the insurance market, depending on the type of business activity conducted and the risk defined by the companies. In addition, their operation should be focused on promoting preventive measures and popularising insurance methods of financing the realisation of environmental risk.

An important role in the process of popularisation of insurance methods is played by the state, which can increase the demand for such tools thanks to the use of incentives (e.g., subsidies to insurance premiums or co-financing of investments in improving environmental safety by providing security in the form of an environmental insurance contract). The activities of the authorities to create and popularise insurance methods of financing the realisation of environmental risk are necessary mainly due to the fact that the economic development, so desired by the state, often poses a threat to the environment, which is a common good that shall be protected by public authorities in accordance with the Constitution of the Republic of Poland.

Keywords: enterprise environmental risk, environmental risk management, environmental insurance, environmental insurance guarantee.

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