
ANNALIS
UNIVERSITATIS MARIAE CURIE-SKŁODOWSKA
LUBLIN – POLONIA

VOL. LVI, 4

SECTIO H

2022

ANNA BERA

anna.bera@usz.edu.pl

University of Szczecin. Institute of Economics and Finance

64 Mickiewicza St., 71-101 Szczecin, Poland

ORCID ID: <https://orcid.org/0000-0002-5916-5606>

DARIUSZ PAUCH

dariusz.pauch@usz.edu.pl

University of Szczecin. Institute of Economics and Finance

64 Mickiewicza St., 71-101 Szczecin, Poland

ORCID ID: <https://orcid.org/0000-0002-0179-4784>

The Perception of Insurance Crime Held by Students

Keywords: insurance crime; insurance fraud; fraud; awareness of students about insurance crime; unlawful extortion of compensation and/or benefits

JEL: G22; D8; A2

How to quote this paper: Bera, A., & Pauch, D. (2022). The Perception of Insurance Crime Held by Students. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, Vol. 56, No. 4.

Abstract

Theoretical background: Researching insurance crime in terms of its perception by students makes it possible to gain knowledge about their interpretation skills, as well as identify attitudes towards insurance frauds. This article supplements the Polish literature on the phenomenon which is a significant dysfunction in the insurance sector.

Purpose of the article: The main aim of this article is to analyse the perception of insurance crime according to research conducted among students. Moreover, additional auxiliary goals were formulated: 1. Determining the level of knowledge of the respondents about insurance crime. 2. Analysing the attitudes of the respondents towards the phenomenon of insurance crime.

Research methods: The paper presents the results of a preliminary study in which a survey was conducted in the form of a questionnaire. In order to verify the posed research question and to achieve the aims defined in

this article, a survey was conducted among students at the University of Szczecin. An original questionnaire was used for the study, which was distributed to 11,000 university students. The research was conducted in the period from January to February 2022. The questionnaire was completed by 416 respondents, which makes it possible to conclude that the survey is representative. The questions in the questionnaire concerned students' knowledge of the phenomenon of insurance crime and its perception by the surveyed group of respondents. The survey results were analysed as a whole, and then presented and described.

Main findings: The research results presented in the article show that the surveyed group of respondents was mostly characterized by an average level of awareness of the phenomenon of insurance crime. In this context, it seems necessary that all insurance entities and institutions make constant efforts to raise the level of insurance awareness of the society about the phenomenon of insurance crime. A significant role in shaping and developing awareness in this area is played by insurance education, which should take place on several levels (didactic, social, institutional).

Introduction

Insurance crime is one of the most serious problems faced by insurance companies around the world. Although the scope of fraud varies depending on the country, the consequences of insurance crime are very similar for each market. Insurance fraud in Europe is estimated to account for up to 10% of all claim policy (Nikolaienko, 2019). Insurance crime concerns all types of insurance (PIU, 2021). Each case of extortion means undue compensation or a benefit, the costs of which are borne by customers in the premiums paid for subsequent insurance. Insurance fraud also affects the trust on which the entire insurance sector is based (Salleh et al., 2018). Moreover, many times frauds discourage honest customers from insuring themselves. Hence, insurers and insurance market institutions are involved in combating and preventing insurance crime. An important aspect of activity in the area of counteracting insurance crime is recognizing knowledge and attitudes towards this negative phenomenon occurring on the insurance market. In the empirical part of this article, reference was made to the results of the survey conducted among students. The perception of the phenomenon of insurance crime by students allows for the assessment of how young people approach insurance crime in the first stage of adult life and what knowledge and attitude they present in this matter.

The main aim of the article is to analyse the perception of the phenomenon of insurance crime according to research conducted among university students. Moreover, the article additionally formulates auxiliary goals: 1. Determining the level of knowledge of the respondents about insurance crime. 2. Analysing the attitudes of the respondents towards the phenomenon of insurance crime.

The article poses the following research question: Are students aware of the scale and negative impact of insurance crime?

The implementation of the set goals and the verification of the research question was carried out on the basis of a critical analysis of the source literature, a comparative analysis, as well as the analysis and evaluation of the obtained primary data (results from survey research).

Literature review

Insurance fraud is one of a major problems facing the insurance industry (Derrig, 2002; Al-Rawashdeh & Al Singlawi, 2016). Insurance fraud is a global issue. Insurance crime is presented in the literature not only on the economic, but also legal and social levels. Insurance crime is based on a mutual agreement of the parties and is a promise of the insurer to pay the amount or to deliver something of value to the insured after a random event or accident that is beyond the control of the contracting parties and in which the promise is of a non-contractual character (Smith & Roberson, 1971). Gill et al. understand the insurance crime as knowingly making a fictitious claim, inflating a claim or adding extra items to a claim, or being in any way dishonest with the intention of gaining more than legitimate entitlement (Gill et al., 1994). Insurance crime occurs when an insurer, insurance intermediary, appraiser or consumer commits deliberate fraud with the purpose of obtaining illegal profit (Tomaš & Todorović, 2016). At the same time, there are many ways for people to commit insurance crimes (Zourrig et al., 2018). Simultaneously, in the insurance system itself, crime may be determined by various phenomena or behaviours which mainly include (Czerwiec-Janus, 2003):

- overinsurance – determination of the sum insured above the value of the insured property,
- multiple insurance – manifested in simultaneous insurance in several insurance companies in order to collect compensation for the same loss,
- concealing information – both to pay a lower premium and to take out insurance,
- changing an uninsured loss into an insurance claim,
- false damage – reporting claims for damage that did not take place at all,
- intentional damage caused by the insured themselves as a result of the use of third parties.

Insurance fraud is a real crime, it undermines the whole system and has an impact on insurers, clients, businesses, society and economy in general. This crime can defraud insurance system and usually is committed by the insured or by a third party claiming benefits based on an insurance policy. All types of insurance can be defrauded, whether commodities, health, life, auto, property and other types of insurance. Insurance fraud is costly and affecting the insurance companies' earnings, reserve deficiencies, rising loss costs and other insurance expenses, as well as pricing difficulties. Therefore, fraud detection and prevention is gaining momentum as a means of reducing insurance costs.

Frauds may occur in many forms, types and sizes. It may be a simple act involving one person or it may be a complex operation involving a large number of people from within and outside the insurer. The most common types are (IAIS, 2011):

- internal fraud – fraud against the insurer by a board member, senior manager or other member of staff on his/her own or in collusion with others who are either internal or external to the insurer,

- policyholder fraud and claims fraud – fraud against the insurer in the purchase and/or execution of an insurance product by one person or people in collusion by obtaining wrongful coverage or payment,
- intermediary fraud – fraud by intermediaries against the insurer, policyholders, customers or beneficiaries.

Moreover, there are two general profiles of fraudsters:

1. The “opportunity” fraudster: an opportunity fraudster is normally a law-abiding person who sees an opportunity to commit fraud. For example, this type of fraudster might imagine that insurers have limitless funds and might find it acceptable to make up claims in order to recover the costs of premiums paid in previous years when there have been no claims. With regard to internal fraud, the fraudster might, for example, falsify expenses or the financial accounts of an insurer for his/her benefit.

2. The “professional” fraudster: a professional fraudster earns or complements his/her income by committing fraud. He or she may continue committing fraud until detected and may target a number of insurers. An extension of the professional fraudster profile is organised crime involving a group of persons capable of committing complex and extensive frauds. The fraudulently obtained funds may be used to finance other criminal acts.

Insurance fraud creates not only additional costs for insurance companies, but also adversely affects the attitudes of consumers (insurance market participants) (Rukhsar et al., 2022). Preventive actions, as well as learning about the attitudes of society, including people from the so-called young generation can save insurers from failure, not only on the financial but also on the social level. If the risk of fraud is not identified in time, it may cause significant financial losses and adversely affect the insurer’s reputation and the trust of stakeholders (Köneke et al., 2015; Tseng & Kang, 2014).

Moreover, insurance fraud has become such a habit that it is no longer the exception, but rather the standard in the insurance market. Thus, insurers should systematically protect themselves against frauds by using active tools to counteract the activity of insurance criminals (Bera et al., 2020). The implementation of the active prevention process in this regard will increase the trust of investors, shareholders, board members, as well as the audit and the society itself. Hence, it is important that information about the perception of frauds (insurance frauds) is not ignored, but subjected to periodic analyses and assessments, and also popularized.

Research methods

In order to verify the posed research question and to achieve the defined aims, the article uses the results of a survey conducted among students at the University of Szczecin. The 10-question questionnaire was addressed to all students of eight faculties (with a total of about 11,000 students). In the conducted research, an indirect

survey method was used by means of applying an Internet survey technique. The CAWI (computer-assisted web interviewing) technique was used in the study. The study was conducted in January and February 2022. In total, 416 responses from students were obtained, which makes it possible to recognize the representativeness of the study.¹ The distribution of the study group presented in Table 1 is as follows:

Table 1. Characteristics of the studied group by sex and age

Sex	Share in %	Age in years	Share in %
Female	65.62	18–25	82.30
Male	34.38	26–35	9.33
		Above 35	8.37

Source: Authors' own study.

Mainly women took part in the study – 65.62%, whereas men accounted for the remaining 34.48%. In terms of the responses of students from individual faculties, students of the Faculty of Economics, Finance and Management responded most willingly to the survey, while the least responses were obtained from students of the Faculty of Theology – 0.96%. The details are presented in Table 2.

Table 2. Characteristics of the studied group by faculty

Faculty	Share in %
Economics, Finance and Management	34.13
Social Sciences	22.80
Humanistic	18.27
Law and Administration	14.90
Exact and Natural Sciences	6.25
Doctor studies	1.44
Physical Culture and Health	1.25
Theological	0.96

Source: Authors' own study.

The results obtained from the research were divided into two parts: the former, which presents and discusses the knowledge of the surveyed students on the phenomenon of insurance crime, and the latter, which presents the perception of insurance crime by the surveyed group of respondents. Therefore, it concerns a certain fragment of reality, which does not allow translating its results into a larger community. However, it may constitute the basis for further research in this area and indicate its direction.

¹ Assuming the confidence level of 0.95, the minimum size of the research sample should be 371 people.

Research results

Knowledge about the phenomenon of insurance crime

The increasing level of financialization makes knowledge and skills concerning financial services the key elements differentiating an individual (Kawiński & Majewski, 2016). Emerging financial illiteracy can worsen living conditions due to suboptimal choices, and existing research shows that the level of financial literacy is closely related to the accuracy of financial decisions (Hilgert et al., 2003; Lusardi et al., 2010; Behrman et al., 2010). An important aspect of financial knowledge is also that concerning the phenomenon of insurance crime.

In order to determine the level of the respondents' knowledge about the phenomenon of insurance crime, a question was asked about the possibility of defining the concept of insurance crime (Figure 1). Most of the respondents (56%) clearly indicated that they can describe this concept. Nearly one third of the students were not able to clearly state whether they could or could not explain what insurance crime was. Finally, 17% of the respondents admitted lack of any knowledge about insurance crime.

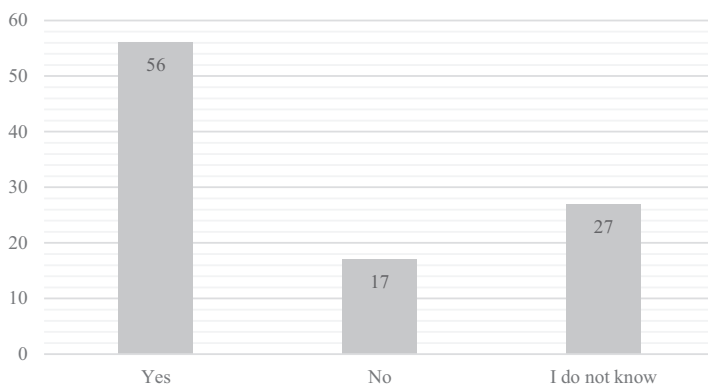


Figure 1. Are you able to define the concept of insurance crime? (%)

Source: Authors' own study.

The next stage of the study was to identify the level of knowledge about the phenomenon of insurance crime by indicating by the respondents the annual number of detected cases of fraudulent claims and insurance benefits in Poland. The obtained results show significant differences in the scale of this phenomenon (Figure 2). Most of the respondents (29%) had no knowledge on this subject. Another 28% of the students indicated that the scale of detected cases constitutes 23,000 cases a year. However, only 21% of all respondents were the closest to the correct answer. According to the latest report of the Polish Chamber of Insurance, 23,225 cases of fraudulent

claims and benefits were detected in Poland in 2020 (PIU, 2021). Only every fifth respondent was able to indicate the real number of cases of insurance fraud. This may prove that the respondents underestimated the scale of the phenomenon that the insurance companies, as well as the entire insurance sector, are struggling with. It should be noted that the actual scale of the phenomenon is unknown. In this case, the so-called dark figure of crimes, that is, unreported crime, should not be forgotten. Therefore, it should be in the interest of all policyholders that insurance companies have funds to counteract and combat the phenomenon of insurance crime (Huneberg, 2017). On the other hand, the increase in the effectiveness of combating crime may, paradoxically, lead to an increase in crime statistics due to the disclosure of the dark figure of crimes. However, the measures taken to prevent insurance crimes may, in the long term, bring about a decrease in criminal phenomena (Płonka et al., 2021).

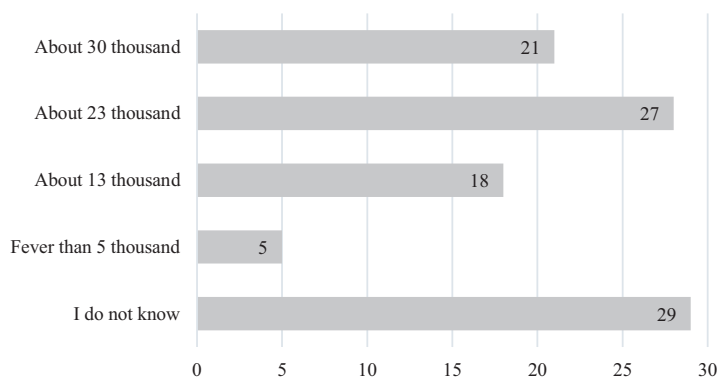


Figure 2. The estimated scale of the phenomenon of insurance crime according to the respondents (%)

Source: Authors' own study.

Further differences in the level of knowledge about the phenomenon of insurance crime appear when asked about the legal regulations of extorting compensation or insurance benefit (Figure 3). The vast majority of students (39%) indicate that the above-mentioned phenomenon is regulated in three Codes: Civil, Criminal and Petty Offenses. Every third respondent gave the correct answer. However, 14% indicated that they had no knowledge of the subject.

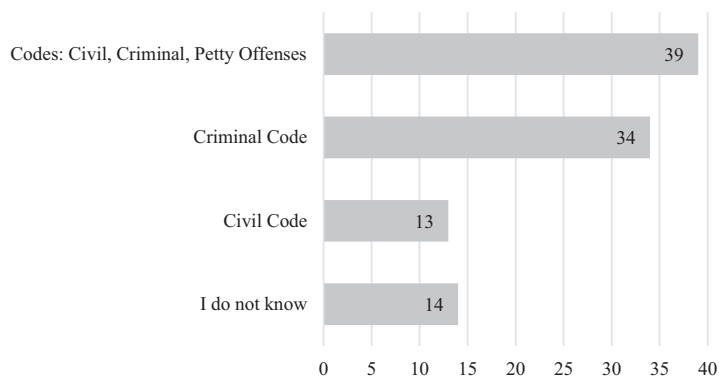


Figure 3. Legal regulation of extortion of compensation or insurance benefit (%)

Source: Authors' own study.

Another aspect of the study was to determine the knowledge of the type of insurance most exposed to the phenomenon of insurance crime (Figure 4). In this case, the majority of students indicated motor insurance (42%). This is confirmed by the research results presented in the PIU report of 2021. According to the data, extortion of claims or insurance benefits in motor insurance accounted for over 40%² of all cases of insurance crime. On the other hand, 32% of the students indicated that financial insurance was the most frequently exposed type of insurance against extortion of damages or benefits. According to PIU data, 19 cases of crime were detected under financial insurance in 2020,³ which is not even one percent of detected cases. Such a large number of indications for financial insurance may indicate a low awareness of the phenomenon of insurance crime in the area of products exposed

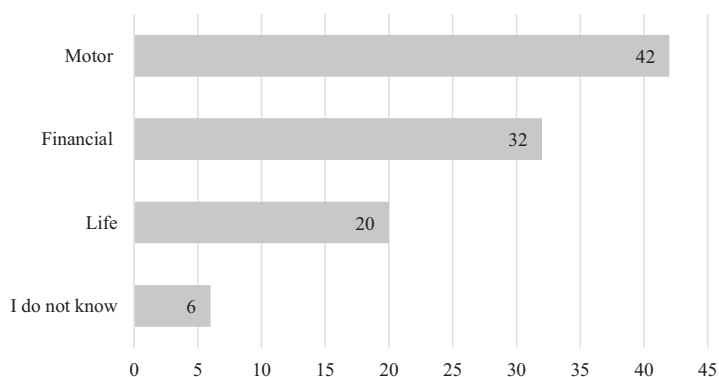


Figure 4. Types of insurance in which insurance crimes are most frequently committed (%)

Source: Authors' own study.

² It concerns frauds related to property and personal risk in motor insurance.

³ PIU includes credit, financial and D&O insurance in this category.

to fraud risk. Only 6% of the respondents indicated that they do not know about the insurance that is most prone to extortion of damages or benefits.

In the next step, the respondents were asked to select one of the three sentences they considered true (Figure 5). Nearly half of the respondents agree that “one extortion of a fictitious car theft causes a loss of insurance premiums of several dozen customers”. On the other hand, every third respondent considers the statement that “an example of an insurance crime is the refusal to pay compensation by an insurance company”. However, 22% of the students indicated that “the number of insurance crimes is known because the data is published by the Police Headquarters”. The above results indicate the fact that half of the respondents consider the statements that correspond to reality to be true.

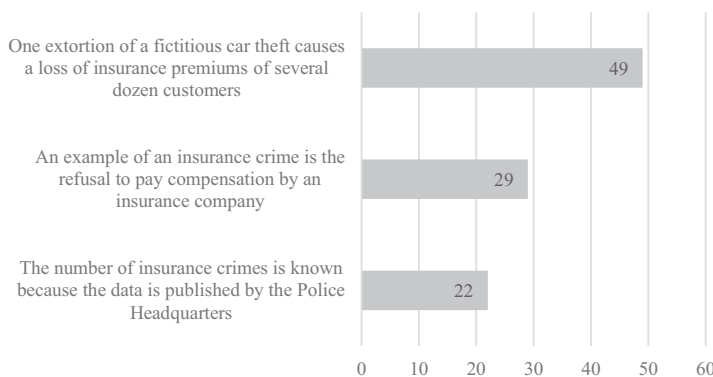


Figure 5. The statement which the respondents considered true (%)

Source: Authors' own study.

Summarizing the first part of the research, it can be indicated that the majority of respondents demonstrate that they are able to define the concept of insurance crime. On the other hand, when detailed questions about the studied phenomenon are asked, most of the respondents are unable to provide a precise answer.

Perception of insurance crime

Another obstacle to the creation of an effective system of counteracting insurance crime is the occurrence of a phenomenon unknown in relation to other prohibited acts, namely society's consent to fraudulent claims. It seems that the phenomenon of social acceptance of committing insurance crimes may even be considered one of the reasons and premises conducive to committing such acts (Połec & Lemańczyk, 2015). Figure 6 presents the perception of insurance crime among the surveyed students. The obtained results indicate that the vast majority of respondents (88%) indicated that the extortion of compensation or insurance benefit was a negative phenomenon. Only 3% considered it positive, so it can be assumed

that the patterns to be followed in the future with regard to insurance crime may be ethically correct in this respect.

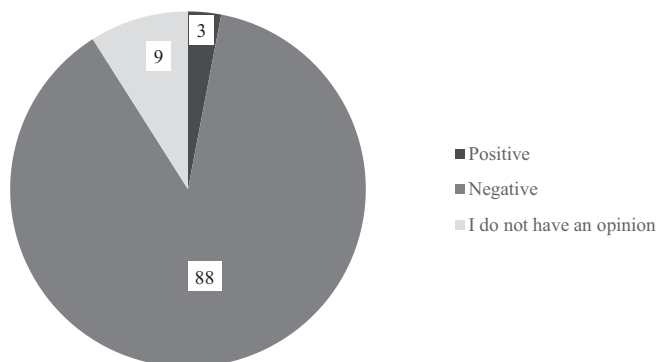


Figure 6. Perception of insurance crime (%)

Source: Authors' own study.

In the next part of the study, the respondents were to indicate whether they are willing to conceal information in order to obtain a lower insurance premium. 17% of the respondents admitted to withholding information in order to pay a lower premium, 39% would not take advantage of this possibility, while as much as 44% of the students were not able to clearly answer this question. A thesis can be put forward that nearly 50% of the respondents are in the group of people at higher risk of possible extortion of compensation or benefits (Figure 7). In such cases, according to the traditional criminological typology and classification of economic offenders proposed by Tiedemann (1972; Górnio, 1994), this may indicate occasional criminals who engage in criminal practice regardless of gender, age, social status or property (sometimes all family members). Such an attitude of occasional perpetrators as indicated by the results of interviews conducted with them during liquidation proceedings, often results from their belief that the insurance company charges insurance premiums in an excessive, unjustified amounts. At the level of the occasional perpetrator, extortion of compensation is intended to compensate the costs incurred from the necessity to pay insurance premiums (Połec & Lemańczyk, 2015). It should be noted that withholding information in order to obtain a lower premium or to assume a risk by an insurance company is one of the most common examples of insurance fraud when renewing or taking out cover (Bashir et al., 2013).

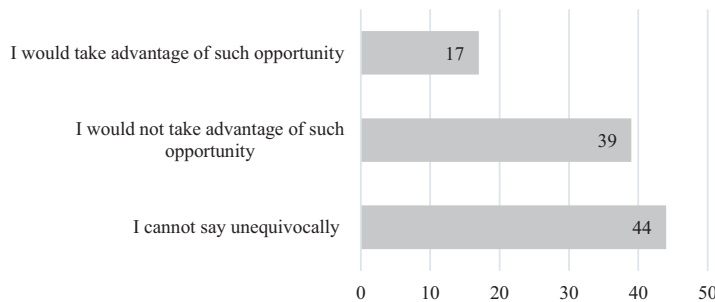


Figure 7. Obtaining a lower insurance premium by concealing information (%)

Source: Authors' own study.

In the next question, the respondents were asked about the knowledge of the person who has extorted compensation or insurance benefit (Figure 8). While admitting such an action would be difficult, informing about knowledge of such a person should be much easier for the respondents. The vast majority of respondents (76%) indicated that they did not know such a person. However, 11% admitted knowing the person who has extorted compensation or insurance benefit.

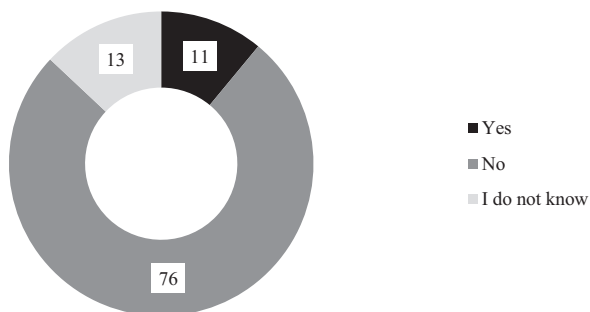


Figure 8. Knowledge of a person who extorted compensation or insurance benefit (%)

Source: Authors' own study.

In the next part, the respondents were asked to indicate to what extent they agreed with the presented statements (Table 3). In this case, there were presented four statements that were referred to by the students.

Despite the fact that 88% of the respondents believe that extortion of compensation or benefits is a crime, over 18% of the respondents agree with the statement that obtaining a higher amount of compensation than is due is an expression of entrepreneurship. Even more respondents, which is as many as 26%, do not have a clear opinion on this.

Table 3. To what extent do the respondents agree with the statements? (%)

	I completely disagree	I rather disagree	I neither agree nor disagree	I rather agree	I completely agree
Achieving more compensation than is due is an expression of entrepreneurship	29	26	26	12	7
Insurance companies act dishonestly towards clients, therefore, clients also try to act dishonestly	8	19	36	26	11
Misleading the insurance company is due to a lack of knowledge about insurance	8	25	31	28	8
Cheating insurance companies is a crime	15	6	9	31	39

Source: Authors' own study.

Similar results were obtained by research among students at Nicolaus Copernicus University in Toruń and WSB University in Toruń (Majewski, 2012) carried out in the second half of 2011, which shows that 73% of the surveyed students realize that cheating insurers is a crime, whereas 56% of the respondents justify misleading the insurer by lack of knowledge. This condition may be due to the low level of trust in financial institutions. Figure 9 presents the level of trust of the studied group towards selected three financial institutions (ZUS, banks, insurance companies). Banks enjoy the highest level of trust, while the Social Insurance Institution (ZUS) the lowest. There is a noticeable difference in the level of trust between banks and insurance companies. Only about 16% of the respondents fully trust insurance companies. While in the case of banks, the number is close to 45%. Additionally, every fourth respondent indicated that they do not trust insurance companies (24.5%). In the case of banks, this number was lower than 10%.



Figure 9. Level of trust in institutions (%)

Source: Authors' own study.

Lack of trust in financial institutions is an important social problem, as the belief that trust is the most important factor in social life, both from the theoretical and practical point of view, seems obvious (Przyłuska-Schmitt, 2018). However, distrust of financial institutions can be explained in different ways. On the one hand, it is said that the distrust results from the lack of experience in using the services of financial institutions. On the other hand, attention is drawn to the greed of financial institutions seeking profit from their activities (Szumlicz, 2014). This condition is also caused by the poor level of insurance education in the society. Clients of insurance companies do not realize that although the insurance company is the direct victim in terms of extortion of compensation or benefits, the insuring party becomes the indirect aggrieved party, by incurring the costs of higher insurance premiums.

Conclusions

The presented research shows that over half of the surveyed students (56%) are able to define the concept of insurance crime. Moreover, the respondents assessed very highly their ability to describe the concept of insurance crime. However, in the detailed question allowing to establish the real level of knowledge about this phenomenon, the obtained answers were not so satisfactory. Only 28% of the surveyed students were able to provide the number of detected cases of extortion of damages or insurance benefits. In addition, only every third respondent was able to correctly indicate the legal regulations of insurance crime, or the products most often affected by insurance fraud.

Therefore, taking into account the research question presented in the article, it can be concluded that students show a quite varied level of knowledge about the phenomenon of insurance crime. Most of them believe that they know in what activities fraud actions are manifested, however, when specific questions arise, for example, about insurance products that are the subject of the most common frustrations, a significant part of the surveyed group of respondents incorrectly indicates that these are financial insurance. On the other hand, when it comes to social consent, the results indicate that the vast majority of respondents (88%) indicate that the extortion of compensation or insurance benefit is a negative phenomenon. Such an attitude should be assessed positively, however, work and activities related to shaping positive attitudes towards insurance crime should be carried out in an uninterrupted manner so that the insurance awareness in this area constantly increases.

Moreover, insurers should address fraud risk when establishing their mission, strategy and business objectives. The overall policy should be consistently implemented in departmental objectives. It should be reflected in the relevant operational procedures and controls.

Summing up, the analysis of the survey results shows that the surveyed group of respondents was mostly characterized by an average level of awareness of the

phenomenon of insurance crime. In this light, it seems necessary that all insurance entities and institutions make constant efforts to raise the level of insurance awareness of the society about the phenomenon of insurance crime. An important role in shaping and developing awareness in this area is played by insurance education, which should take place on several levels (didactic, social, institutional). As the research shows, the students themselves constitute a potentially appropriate group to shape positive patterns of behaviour in their consciousness at this stage and to form the opinion that insurance crime is a highly negative phenomenon. Additionally, the main entities of the insurance market have a special role to play in shaping insurance awareness in this respect. The activity of the Polish Chamber of Insurance remains invaluable in this respect.

References

- Al-Rawashdeh, F., & Al Singlawi, O. (2016). The existence of fraud indicators in insurance industry: Case of Jordan. *International Journal of Economics and Financial Issues*, 6(S5).
- Bashir, I., Madhavaiah, C., & Krishna Naik, J.R. (2013). Motor insurance frauds in India: Detection and control mechanisms. *Srusti Management Review*, 6(2), 27–35.
- Behrman, J., Mitchell, O.S., Soo, C., & Bravo, D. (2010). Financial literacy, schooling, and wealth accumulation. *PARC Working Paper Series*, 32. doi:10.3386/w16452
- Bera, A., Kordela, D., & Pauch, D. (2020). *Przestępczość ubezpieczeniowa. Uwarunkowania, skala, przeciwdziałanie*. Szczecin: Wyd. Naukowe US.
- Czerwicz-Janus, E. (2003). *Przestępczość ubezpieczeniowa – kierunki usprawnienia systemu zapobiegania*. Gdańsk: CeDeWu.
- Derrig, R.A. (2002). Insurance fraud. *Journal of Risk and Insurance*, 69(3), 271–287. doi:10.1111/1539-6975.00026
- Gill, K.M., Woolley, A., & Gill, M. (1994). Insurance fraud: the business as a victim? In M. Gill (Ed.), *Crime at Work. Studies in Security and Crime Prevention, I*. London: Palgrave Macmillan. doi:10.1007/978-1-349-23551-3_6
- Górniok, O. (1994). *Przestępczość gospodarcza i jej zwalczanie*. Warszawa: Wyd. Naukowe PWN.
- Hilgert, M.A., Hogarth, J.M., & Beverly, S.G. (2003). Household financial management: The connection between knowledge and behaviour. *Federal Reserve Bulletin*, 89(7).
- Hunberg S. (2017). Preventative measures of insurers against insurance fraud with particular regard to motor insurance. *Obiter*, 38(1). doi:10.17159/obiter.v38i1.11507
- IAIS. (2011). *Application Paper on Deterring, Preventing, Detecting, Reporting and Remediating Fraud in Insurance*.
- Kawiński, M., & Majewski, P. (2016). Financial and insurance literacy in Poland. *Wiadomości Ubezpieczeniowe*, 4, 21–32.
- Köneke, V., Müller-Peters, H., & Fetchenhauer, D. (2015). *Versicherungsbetrug verstehen und verhindern*. Wiesbaden: Springer Fachmedien. doi:10.1007/978-3-8349-6943-9
- Lusardi, A., Mitchell, O.S., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2). doi:10.1111/j.1745-6606.2010.01173.x
- Majewski, P. (2012). *Przyzwolenie społeczne na przestępczość ubezpieczeniową – wyniki badań*. XV Międzynarodowa Konferencja „Przestępczość Ubezpieczeniowa”. Materiały konferencyjne. Szczecin.
- Nikolaienko, S. (2019). Fraud in health insurance and ways to avoidance. *Economics. Management. Innovations*, 2(25). doi:10.35433/ISSN2410-3748-2019-2(25)-6

- PIU. (2021). *Analiza danych dotyczących przestępstw ubezpieczeniowych ujawnionych w 2020 roku*. Polska Izba Ubezpieczeń. Komisja ds. przeciwdziałania przestępczości ubezpieczeniowej. Warszawa. Retrieved from <https://piu.org.pl/analiza-przestepczosc-ubezpieczeniowa-w-2020-t/>
- Płonka, M., Oręziak, B., & Walec, M. (Eds.). (2021). *Rynek ubezpieczeniowy. Zapobieganiem przyczynom przestępczości*. Warszawa: Wyd. Instytutu Wymiaru Sprawiedliwości.
- Poleć, R., & Lemańczyk, M. (2015). Przeciwdziałanie przestępczości ubezpieczeniowej w aspekcie jej społecznej akceptacji. *Studia Oeconomica Posnaniensia*, 3(11), 111–121. doi:10.18559/SOEP.2015.11.8
- Przyłuska-Schmitt, J. (2018). Insurance behavior of generation Y in Poland and in Germany. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie*, 119, 243–253. doi:10.29119/1641-3466.2018.119.16
- Rukhsar, L., Bangyal, W., Nisar, K., & Nisar, S. (2022). Prediction of insurance fraud detection using machine learning algorithms. *Mehran University Research Journal of Engineering and Technology*, 41(1). doi:10.22581/muet1982.2201.04
- Salleh, F., Kassim, D.N.H.A, Yazid, A.S., & Rashid, N. (2018). Consumer behaviour and insurance claim fraud in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 8(12), 586–598. doi:10.6007/IJARBS/v8-i12/5057
- Smith, L.Y., & Roberson, G.G. (1971). *Business Law – Uniform Commercial Code*. St. Paul: West Publishing Company.
- Szumlicz, T. (2014). Stan społeczeństwa obywatelskiego. Stosunek do instytucji finansowych. In J. Czapiński & T. Panek (Eds.), *Diagnoza Społeczna 2013. Warunki i Jakość Życia Polaków. Raport* (p. 345). Warszawa: MPiPS.
- Tiedemann, K. (1972). *Rechts Gutachten an den 49 Deutschen Juristentag*. München: Deutscher Juristentag e.V.
- Tomaš, D., & Todorović, I. (2016). Modelling fraud prevention process. *Journal of Corporate Governance, Insurance, and Risk Management (JCGIRM)*, 3(2), 76–87.
- Tseng, L.M., & Kang, Y.M. (2014). The influences of sales compensations, management stringency and ethical evaluations on product recommendations made by insurance brokers. *Journal of Financial Regulation and Compliance*, 22(1). doi:10.1108/JFRC-08-2012-0031
- Zourrig, H., Park, J., El Hedhli, K., & Zhang, M. (2018). The effect of cultural tightness – looseness on fraud perception in insurance services. *International Journal of Quality and Service Sciences*, 10(2), 138–148. doi:10.1108/IJQSS-02-2017-0016