Selected Aspects of Corporate Social Responsibility of the ICT Sector in Poland – Results of a Study

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Abstract

Purpose: The main purpose of this article was to identify and evaluate selected aspects of corporate social responsibility (CSR) of ICT companies in Poland, such as CSR-related standards and norms, socially responsible activities in the area of employees, and mechanisms to prevent violations of the law and unethical behaviour.

Methodology: the CAWI-type survey was conducted in July-August 2022. The subject of the survey were software houses (Polish and international) operating in Poland.

Results: The survey showed that issues such as human capital development, business ethics and compliance, and risk and crisis management are of key importance to the operation of the surveyed companies now and in the future.

Conclusions and recommendations: Most of the surveyed entities equated CSR with philanthropic responsibility, and few ICT companies linked CSR with economic responsibility. The analysis of engagement in the employee area showed the high importance given to diversity, equality and inclusion. A limitation of the study was its focus on a few selected aspects of CSR, which did not provide a complete picture of ICT companies' socially responsible activities. It is worth investigating pro-environmental activities in the future.

1. Introduction

With the dynamic development of the information and communication technology (ICT) sector, questions arise about its impact on the social and natural environment. On the one hand, its vital role in transforming the world is emphasised and seen as a stimulant for economic development, creating innovative products and a marker of progress, while on the other, accusations are levelled at it for colluding with repressive regimes, violating labour rights in the supply chain, and restricting freedom of expression and the right to privacy (Business & Human Rights Resource Centre, 2018). Occasionally, statements exposing the destructive impact of ICT companies on the environment appear in public discourse. In 2020, their share of global greenhouse gas emissions ranged from 1.8% to 2.8%, equivalent to that of the aviation sector (Freitag et al., 2021). It has been noted that energy consumption during a computer's use phase depends not only on the hardware requirements but also on the software configuration (Sissa, 2009). Therefore, the analysis of the environmental impact of ICTs considered not only the hardware but also the software.

ICT companies are increasingly under pressure to operate sustainably and socially responsibly. This is an offshoot of the expectations of investors, business partners, employees, and customers, as well as an increase in ESG (Environmental, Social, Governance) regulations. For example, in January 2022 the European Commission published a Declaration of Digital Rights and Principles (European Commission, 2021), addressing three aspects of ICT businesses, i.e. environmental, social and governance. According to its provisions, ICT should protect human rights and support democracy; everyone should have access to the Internet, develop digital skills and exercise control over their data.

The ICT industry, given its many environmental and social challenges, will need to prioritise the following issues in the near future (George et al., 2021):

- climate change and carbon footprint;
- green technology and customer innovation; technology companies are in a unique position not only to reduce their own climate emissions, but also to develop technology solutions to help their customers meet their climate goals;
- water and waste management;
- human capital development; this includes issues such as employee education and engagement, attraction and retention;
- *Diversity, equity and inclusion (DEI)*; DEI in relation to employees is not limited to gender equality, but also includes ethnicity, disability and LGBTQIA+ issues;
- corporate governance; this includes board composition (in terms of diversity, independence and experience), board effectiveness and transparency;
- business ethics and compliance; this involves adherence to core values such as honesty and integrity and adherence to accepted principles (e.g. anti-corruption, bribery);
- risk and crisis management (concerning e.g. privacy and data security).

The following part of the paper presents the manifestations of social responsibility in the ICT sector. Then, own research is justified and described, in particular the essence of software houses – the subject of research – is explained. The main part of the article is a presentation of the results of research devoted to identifying and assessing selected aspects of social responsibility of ICT enterprises in Poland.

2. The Manifestations of Social Responsibility in the ICT Sector

The progressive devastation of the environment and increasing social problems have recently made corporate management concepts such as sustainable development/ESG, corporate social responsibility (*CSR*), increasingly popular. The phrase 'corporate social responsibility' was first used at the end of the 19th century by A. Carnegie, who argued that a corporation should perform the functions of a good citizen who has in mind not only his own interest, but also the common good. A. Carroll, in defining social responsibility, distinguished four types of it. His model, i.e. Carroll's Pyramid (Carroll, 1991), showed the foundation is economic responsibility. The primary task of a business, according to Carroll, is to generate profit, which is not only a good for the entrepreneur but also for society. The second layer, i.e. legal responsibility, is related to compliance with the relevant state laws, referring to the activities such as compliance with the law, avoiding possible disputes and anticipating changes in the law; both economic and legal responsibility are required by society. The next layer is ethical responsibility, meaning the obligation to do what is right, honest and fair, to avoid harming others. This is the responsibility expected by society, and Aat the top of the pyramid there is the philanthropic responsibility desired by society, meant as providing goods to the community, and improving the quality of life.

Corporate Social Responsibility in the ICT sector is a concept whereby companies voluntarily take action for the benefit of employees, contractors, the local community, and the environment. CSR is a strategic, long-term, holistic approach, based on finding solutions that benefit both the enterprise and its stakeholders. Actions taken by ICT companies in the spirit of social responsibility and sustainability are referred to in the literature as 'Green IT' and 'Green by ICT'. Green IT means creating sustainable products, and includes the use of more energy-efficient IT equipment, optimising the use of resources, reducing carbon emissions and minimising the generation of electronic waste. Naumann et al. defined sustainable software as "software whose direct and indirect negative impacts on the economy, society, people and the environment resulting from the development, implementation and use of the software are minimal and/or which has a positive impact on sustainability" (Naumann et al., 2011). Green by ICT, on the other hand, are software-based tools that enable other industries to reduce CO_2 emissions. Examples include the use of intelligent energy management systems in buildings, environmental monitoring systems based on IoT (Internet of Things) sensors and platforms to promote recycling and energy savings.

ICT companies can manifest their commitment to the concept of corporate social responsibility by redefining their existing business model and building a CSR strategy, separating managerial positions within the organisational structure dedicated to coordinating socially and environmentally responsible activities, developing non-financial reports, promoting transparency and countering corruption, working on miniaturisation, increasing the functionality of hardware and software, and ultimately introducing eco-labelling. Examples of eco-labelling include B Corp and TCO Certified. What distinguishes B Corp-certified companies is that they invest in projects that create a healthy and inclusive work culture, enable community development and serve to protect the environment (Fiix, 2018), whilst TCO Certified is a type of eco-label according to ISO 14024, based on criteria such as energy efficiency, product longevity and safety, and social responsibility, demonstrated, for example, by freedom of association. TCO Certified offers certification for eight product types: displays, notebooks, desktops, all-in-one PCs, tablets, smartphones, projectors and headsets.

To effectively monitor the implementation of CSR, ICT companies can implement widely recognised standards and norms:

- ISO 26000 – an international standard that defines seven CSR issues: organisational governance, human rights, labour practices, environment, fair operating practices, consumer issues and community engagement and development;
- *Sustainability Reporting Initiative* – a standard used in the preparation of corporate social reporting, developed by the Global Reporting Initiative (GRI);

- SA8000 – a standard that sets out the requirements a company should meet in terms of employee relations; it specifies, among other things, freedom of association and the right to collective bargaining, non-discrimination, non-use of physical and psychological coercion;
- AA1000 *(AcountAbility1000)* – a standard that facilitates setting strategic objectives, measuring progress towards these objectives, auditing the organisation in the context of building relationships with different stakeholder groups;
- ISO 9000 series – the ISO 9000 family of standards includes the basic standards for quality management;
- ISO 14001 – an environmental management standard, confirming that the company cares about protecting the environment;
- ISO 45001 – an occupational health and safety management standard;
- WCAG 2.0 standard – a standard that describes the design of a public institution's website that will be accessible to all, including people with disabilities. Accessibility of a website means the extent to which it can be seen, understood and viewed by all users, regardless of their characteristics or impairments, and regardless of the characteristics of the software and hardware they use;
- Global Compact – sets out ten core principles in the areas of human rights, labour rights, environmental protection and anti-corruption (see UN Global Contact, n.d., for more information);
- EMAS – the EU Eco-Management and Audit Scheme, aimed at all types of organisations interested in implementing comprehensive environmental solutions.

An interesting initiative dedicated to ICT companies is the Code of Conduct on the protection of data processed in the cloud, introduced by the Cloud *Infrastructure Service Providers in Europe* (CISPE). The code provides clarity on data protection requirements (RODO compliance) for cloud infrastructure providers.

Finally, the B-Corp and Slow Technology movements are also worth mentioning. The B-Corp movement refers to the community of ICT companies that have been certified as 'Benefit Corporations' (B-Corps). B-Corps is a company that cares not only about generating profits for its owners and shareholders, but also contributes to social good and environmental protection. In Poland, the movement has been growing since 2018. Slow Technology is human-centred, environmentally sustainable and socially desirable technology (Patrignani & Whitehouse, 2014). In support of the Slow Technology movement, ICT sector actors promote a more conscious and moderate use of technology, educate their stakeholders about CSR, encourage them to pay attention to quality of life and engage in pro-environmental practices.

3. Literature Review

The literature search showed that the subjects of previous inquiries by ICT sector researchers were mainly Green IT and Green by IT. One can easily find studies describing the ESG ratings of ICT companies (Egorova et al., 2022), the impact of socially responsible activities on the competitiveness of technology companies and sustainability (Bernal-Conesa et al., 2017), the capacity of the ICT sector to mitigate climate change and improve energy efficiency in the economy (Bibri, 2009), the creation of sustainable business management models (Hba et al., 2020), and the environmental impact of software (Kern et al., 2018). Hoeltl's article showed the potential of the ICT industry to force companies to implement corporate social responsibility (Hoeltl, 2015), while Pothuraju and Alekhya desribed the relationship between corporate social responsibility practices and quality of working life (Pothuraju & Alekhya, 2020).

The literature revealed a skeptical attitude towards the pro-environmental activities of ICT companies (Egorova et al., 2022). Researchers noted that these companies often lacked the motivation to create sustainable technologies, and practiced greenwashing. This was borne out by a KPMG report showing that 45% of technology CEOs found it difficult to link their growth strategy to a broader social purpose (KPMG, 2020).

There is a lack of studies dedicated to building relationships with stakeholders, implementing standards linked to social responsibility, describing approaches to *compliance*, and presenting socially responsible activities dedicated to employees. The rationale for undertaking the research was that ICT companies operating in Poland are poorly diagnosed in terms of CSR. An exception in this respect was the research work carried out at the end of 2021, on the initiative of INSPIRED and S. Kulczyk's InCredibles programme, entitled "Polish technology companies towards global challenges" (Inspired and InCredibles, 2022) and the study by Teneta-Skwiercz and Sikacz. The latter described the corporate governance mechanisms of ICT companies in Poland, such as transparency (reporting of non-financial information), data protection, ethics and anti-corruption, and diversity in the composition of governing bodies (Teneta-Skwiercz & Sikacz, 2023).

Meanwhile, the importance of the ICT sector in Poland is growing dynamically. A report by the Central Statistical Office (CSO) demonstrated that in 2022 the number of people working in the sector increased annually by 11.2%, net sales revenues amounted to PLN 262.9 billion and increased by 23.9% compared to the previous year, expenditure on research and development activities was PLN 8303.1 million and increased annually by 40.5% (Gumiński et al., 2023). Among the main benefits associated with the development of the ICT market in Poland, there were an increase in productivity and labour productivity, improvement of social welfare and rationalisation of expenditure in individual sectors of the economy, as well as optimisation of the use of resources are cited (Ministerstwo Rozwoju [Ministry of Development], 2017).

The author's research may at least partly bridge the observed research gap.

4. Methodology

4.1. The Essence of Software Houses

The main objective of the research was to identify and assess selected aspects of social responsibility of ICT enterprises in Poland. The main research question was: What type of responsibility, from among those described in the model of social responsibility by A. Carroll, is preferred by ICT firms in Poland? The empirical research was to provide answers to the following specific research questions:

- What priority do ICT companies give to social and environmental challenges and how do they understand corporate social responsibility?
- Which CSR-related standards and norms are most popular?
- Are there positions dedicated to CSR/sustainability within the organisational structure of these companies?
- What measures do ICT companies take in the area of employees?
- What mechanisms do they use to prevent violations of the law and unethical behaviour?

According to the Central Statistical Office, the ICT sector is a branch of the economy comprising enterprises whose main activity is the production of goods and services that make it possible to electronically record, process, transmit, reproduce or display information (see GUS, n.d.). The research covered software houses operating in Poland (Polish and international), i.e. companies engaged in software development, which should be distinguished from companies in the ICT sector that create hardware solutions or sell ready-made software.

A software house is a company which focuses on providing specialist IT services, such as bespoke software, mobile apps and artificial intelligence; such entities base their advantage on their in-depth knowledge of the business. Often, just researching needs and preparing specifications takes them longer than developing software. Software houses are used by the most demanding customers who need individual solutions and dedicated software. The distinguishing characteristics of this type of entity are included in Table 1.

Table 1. Key attributes of a software house company

Characteristics	Software house
High-quality code	... benefits from an experienced team of developers with the skills to produce high-quality code
Full communication with the team	... allows the client to communicate directly with developers
Software development methodologies	... uses proven project and process management methodologies such as Agile, Scrum
Full-stack teams	... has teams of developers who are able to work on the entire project – from backend to frontend
Flexibility	... is able to adapt to the changing needs of the client, responding dynamically to new requirements
Specialisation in specific technologies	... has experience in selected technologies or programming languages such as Java, Node.js, Python, PHP, C#, ReactNative, Kotlin, Swift, Flutter
Experience in building different types of solutions	... has experience in developing different types of applications such as mobile apps, web apps, integrations with AI solutions, loyalty and sales support applications, UBER apps, marketplace apps, e-commerce solutions

Source: own study.

4.2. Characteristics of the Research Sample

Data and information were obtained using a CAWI (Computer-Assisted Web Interview) survey method in July and August 2022. No incentive was offered to participate in the survey which covered the leading, according to the platform www.clutch.co/developers/poland, software companies in Poland. The website of the aforementioned platform listed 1049 such companies in the surveyed period. The invitation was sent to 247 randomly selected entities. Ultimately, 30 entities took part in the survey (the survey return rate of 12%).

Figure 1. Size of enterprises (measured by number of employees) participating in the survey

Source: own elaboration based on own survey.

The majority of companies participating in the survey were micro and small (up to 49 employees) enterprises (Figure 1).
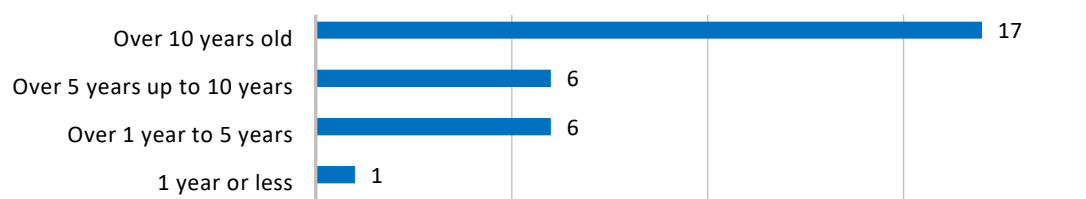

Figure 2. Age of enterprises participating in the survey

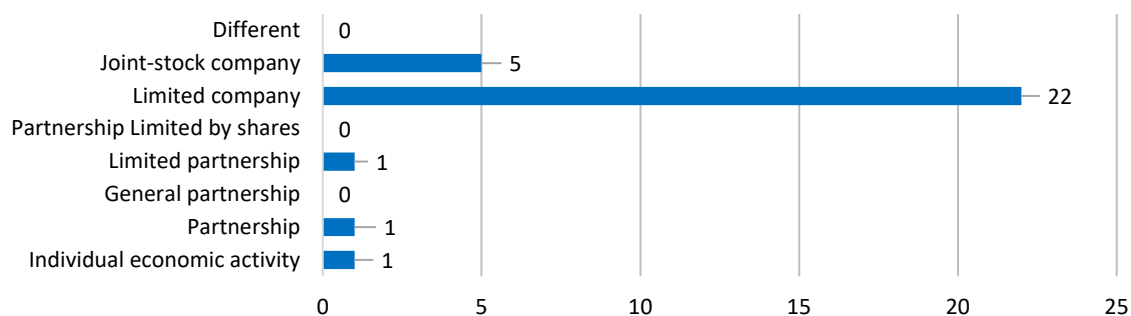Source: own elaboration based on own survey.

Figure 3. Organizational and legal form of enterprises participating in the survey

Source: own elaboration based on own research.

These were mainly companies operating on the market for more than 10 years (Figure 2), in the form of a limited company (Figure 3). The respondents were 23 men and 6 women. One person in the gender question chose the option "I prefer not to answer". There was a strong predominance of persons representing senior (22) and middle management (4), in the age range of 31-40 (12), 41-50 (11) and 25-30 (6).

5. Results

First, the respondents were asked to identify up to three issues out of the eight listed, of key importance to the operation of the company now and in the future (Table 2). These included in the survey were taken from the publication cited in the Introduction, entitled The Next Big Leap' Towards ESG Maturity in Tech Sector by George et al. All the surveyed companies identified "Human capital development: improving employee skills, employee engagement, employee wellbeing, attracting and retaining employees". This was followed by "Business ethics and compliance: adhering to core values such as honesty and integrity and adhering to accepted principles such as anti-corruption, anti-bribery" (21 responses), and "Risk and crisis management" (11 responses). The issues of least importance were climate change (0 responses), water and waste management (1 response) and corporate governance, in particular disclosure and gender balance in management and governance bodies (2 responses).

Table 2. Issues of key importance for the operation of the company now and in the future
(maximum 3 responses) (N = 30)

Issues	Number of responses	% of N in column
Human capital development: improving employee skills, employee engagement, employee wellbeing, attracting and retaining employees	30	100.00%
Business ethics and compliance: upholding core values such as honesty and integrity and adhering to accepted principles such as anti-corruption, bribery	21	70.00%
Risk and crisis management	11	36.70%
Green technology and customer innovation: developing technology solutions to help customers achieve their climate goals (Green IT)	8	26.70%
Diversity and inclusion: gender equality, ethnic issues, disability, LGBTQ+	7	23.30%
Corporate governance: disclosure of information, gender balance in governance and oversight bodies	2	6.70%
Water and waste management	1	3.30%
Climate change	0	0.00%
Total	30	100.00%

Source: own elaboration based on own survey.

Another question asked how corporate social responsibility is understood (Figure 4).
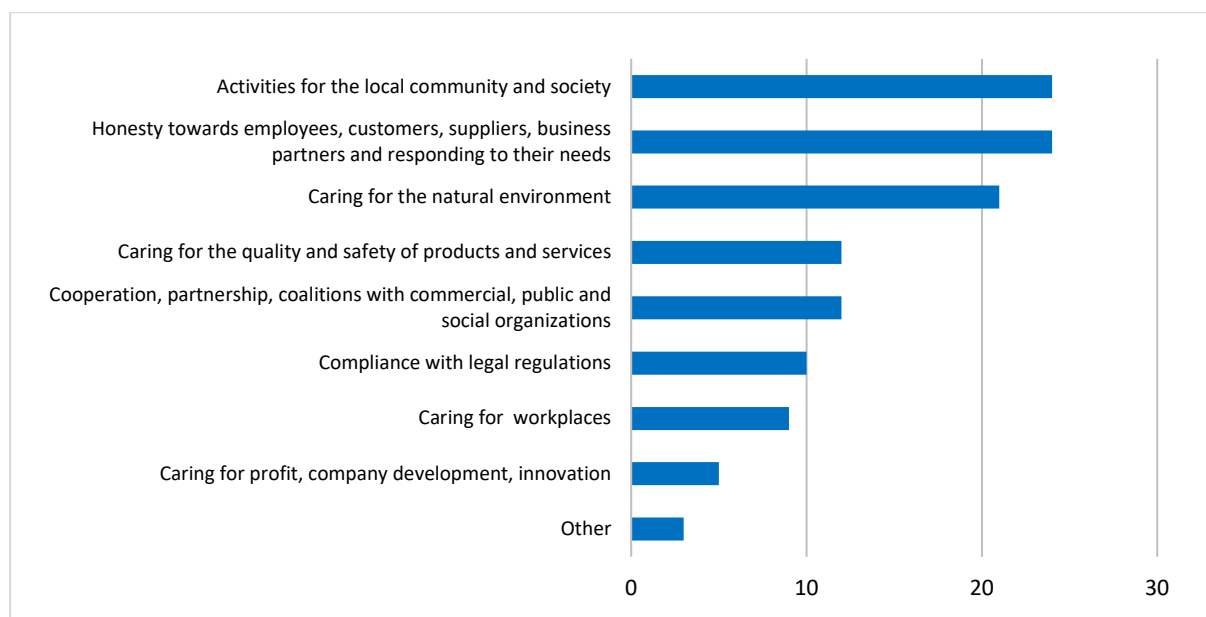

Figure 4. The respondents' understanding of corporate social responsibility (*N* = 30)

Source: own elaboration based on own survey.

Most frequently the concept of CSR was associated with activities for the benefit of the local community, society (24 responses), honesty towards employees, customers, suppliers, business partners, responding to their needs and expectations (24 responses) and caring for the natural environment (21 responses). Exceptions included companies for which CSR meant "caring for profit, company development and innovation" (5 responses).

Table 3. CSR norms/standards applied in software houses (*N* = 30)

CSR-related standards/standards	Number of responses
We do not have/apply any of the following standards/standards	12
WCAG 2.0 standard (adapted to ISO/IEC 40500:2012 and EN 301 549)	9
9000 series standards	4
ISO 14000 series standards	3
Code of Conduct on the protection of data processed in the cloud, introduced by CISPE	1
ISO 26000	1
Global Compact	1
Sustainability Reporting Initiative	1
EMAS – Eco-Management and Audit Scheme	0
AA1000	0
SA8000	0
B-Corp	0

Source: own elaboration based on own survey.

In response to the question on the use of CSR-related norms/standards, out of the eleven included in the survey, the WCAG 2.0 standard (adapted to ISO/IEC 40500:2012 and EN 301 549) (9 responses) and the ISO 9000 (4 responses) and 14000 (3 responses) series of norms were most frequently

indicated. Among the entities surveyed, there were no companies with an EMAS Eco-Management and Audit Scheme or applying AA1000, SA8000, B-Corp principles (Table 3).

Having a unit/individual position dedicated to Corporate Social Responsibility in the organisational structure is conducive to taking action in a well-considered, systematic and controlled manner. The survey revealed that only four companies had this type of solution.

The next question concerned socially responsible actions taken towards employees. The respondents could tick all the matching answers (Table 4).

Table 4. Actions in the area of employees (*N* = 30)

Activities in the employee area	Number of responses	% of *N* in column
We consider only competence and experience when assessing candidates for employment and are guided by the principle of equal treatment of people of different ethnic backgrounds, genders and religions	28	93.30%
We enable employees to maintain a work-life balance	27	90.00%
We apply equal pay for working men and women for work of equal value	23	76.70%
We provide for job stability	22	73.30%
We consult employees on the most important projects for the company	22	73.30%
We provide employees at all levels with professional development and access to training	21	70.00%
We take measures to protect employees from bullying, harassment and other types of harassment, both from other employees and from people outside the company (customers, suppliers, clients)	21	70.00%
We finance vaccinations, sports activities, supplementary health insurance, pensions	20	66.70%
We provide a transparent reward and punishment system	13	43.30%
We provide an online platform through which employees can submit their ideas (for innovations, improvements, etc.)	10	33.30%
We support employee volunteering	10	33.30%
We provide a transparent promotion system	8	26.70%
We allow employees to join and/or establish a trade union of their choice	6	20.00%
None of the above	1	3.30%
Total	30	100.00%

Source: own elaboration based on own survey.

The vast majority of these entities practiced such measures as:

- paying attention, when assessing job applicants, only to competence and experience; being guided by the principle of equal treatment of people of different ethnic origin, gender and religion (28 responses);
- enabling employees to achieve a work-life balance (27 responses);
- applying equal pay for working men and women for work of equal value (23 responses);
- ensuring employment stability and consulting employees on the company's most important projects (22 responses each);
- providing employees at all levels with professional development, access to training (21 responses);
- protecting employees against bullying and all forms of harassment, both by other employees and from outside the company (21 responses);
- financing of vaccinations, sports activities, additional health insurance, pensions (20 responses).

Fewer than ten companies had a transparent promotion system and allowed employees to join and/or establish a trade union of their choice (8 and 6 responses).

Figure 5. Mechanisms for counteracting violations of the law and unethical behaviour (*N* = 30)

Source: own elaboration based on own research.

Finally, the respondents were asked about the solutions their company uses to effectively prevent breaches of the law and unethical behaviour (Figure 5). The most common responses included a customer data security policy (18 responses) and codes of ethics/code of good practice (11 responses). Eight companies did not have any such mechanisms in place, and only one company implemented a CRISPE code.

The analysis of the survey results allowed to draw the following conclusions:

- the vast majority of surveyed entities identified CSR with philanthropic responsibility, accompanied by the attitude "Be a good citizen", and ethical responsibility and the attitude "Act honestly, rightly, fairly";
- few ICT companies combined CSR with economic responsibility and the attitude "I care about profit, innovation and company development". This is surprising as this type of responsibility is demanded by society and forms the basis of Carroll's pyramid of responsibility;
- the activity of ICT companies in the area of employees indicated a strong commitment to diversity, equality and inclusion.

The study revealed little interest in ICT companies in using CSR-related standards and norms in their current operations. This can be partly explained by the size of the surveyed companies as half of them employed 49 or fewer people, whilst the principles of the Global Compact, Sustainability Reporting Initiative, EMAS and B-Corp are initiatives that usually appear in large enterprises.

6. Discussion and Conclusions

It is not know exactly what impact new technologies will have on various sectors of the economy. One thing is certain, the modern economy requires innovative communication and information solutions, which means the further dynamic development of the ICT sector and an increase in its impact on the environment. Thus the question arises of whether ICT companies are aware of this impact and the social and environmental challenges generated by the environment.

The research aim of the study has been achieved. The author succeeded in recognising and evaluating selected aspects of CSR of the studied ICT companies. The research showed that the development of human resources was of the greatest importance for the surveyed companies. This was the result of a deficit in the market of ICT specialists, and also of the need to constantly learn, acquire new skills and update knowledge. What was puzzling, was the poor exposure of environmental issues which may indicate low environmental awareness and/or underestimation of the impact that the activities of ICT companies have on the natural environment. Underestimating the importance of recognized CSR standards, combined with the lack of a position dedicated to CSR, may indicate an insufficient degree of institutionalisation of socially responsible activities in the surveyed companies and problems with assessing the compliance of the declarations they submit with the actions actually undertaken. In the employee area, the majority of the entities practiced such measures as paying attention (when assessing job applicants) only to competence and experience; being guided by the principle of equal treatment of people of different ethnic origin, gender and religion, and enabling employees to achieve a work-life balance.

The limitation of the research was the focus on a few selected aspects of CSR, which did not provide a full picture of the socially responsible activities of ICT companies. In addition, the research sample was highly unsatisfactory and lacked representativeness, therefore any final conclusions can only be applied to the software houses examined. Such aspects of social responsibility of ICT enterprises as activities for the local community, customers, suppliers and business partners could be an interesting direction for future research. It is worth exploring pro-environmental activities, in particular the degree of preparation of ICT sector enterprises to operate in accordance with the circular economy model.

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Wybrane aspekty społecznej odpowiedzialności przedsiębiorstw sektora ICT w Polsce – wyniki badań

Streszczenie

Cel: Głównym celem artykułu jest identyfikacja i ocena wybranych aspektów społecznej odpowiedzialności biznesu (CSR) przedsiębiorstw sektora ICT w Polsce, takich jak standardy i normy związane z CSR, społecznie odpowiedzialne działania w obszarze pracowników oraz mechanizmy zapobiegania naruszeniom prawa i nieetycznym zachowaniom.

Metodyka: Badanie typu CAWI zostało przeprowadzone w lipcu i w sierpniu 2022 roku. Obiektami badania były działające w Polsce software house'y.

Wyniki: Z badania wynika, że kluczowe znaczenie dla funkcjonowania badanych firm obecnie i w przyszłości mają takie zagadnienia jak rozwój kapitału ludzkiego, etyka biznesu i compliance oraz zarządzanie ryzykiem i sytuacjami kryzysowymi.

Wnioski i rekomendacje: Większość badanych podmiotów utożsamia CSR z odpowiedzialnością filantropijną, a nieliczne firmy ICT łączą CSR z odpowiedzialnością ekonomiczną. Analiza zaangażowania w obszarze pracowniczym wskazuje na dużą wagę przywiązywaną kwestiom różnorodności, równości i integracji. Warto zbadać w przyszłości działania prośrodowiskowe, w szczególności stopień przygotowania przedsiębiorstw sektora ICT do funkcjonowania zgodnie z modelem gospodarki o obiegu zamkniętym.

Oryginalność/wartość: Przesłanką do podjęcia badań był fakt, że przedsiębiorstwa ICT działające w Polsce są słabo zdiagnozowane pod kątem CSR. Wyniki badania mogą być wartościowe dla przedsiębiorstw ICT w kontekście diagnozowania swojej dojrzałości w zakresie CSR.

Słowa kluczowe: sektor ICT, software house, społeczna odpowiedzialność biznesu