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ENVIRONMENTAL PROTECTION IN THE PERSPECTIVE OF CSR ACTIVITIES UNDERTAKEN BY POLISH ENTERPRISES OF THE CONSTRUCTION INDUSTRY

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ABSTRACT: The article aims to show the level of involvement of Polish enterprises from the construction industry in the implementation of CSR programmes, with particular emphasis on environmental protection tasks. The survey, carried out with the use of a questionnaire technique, covered 177 enterprises, including their division into large, medium, and small ones. The survey was carried out using CAVI and PAPI techniques with the use of a proprietary questionnaire form. The results of the research indicate that environmental protection is not a priority CSR area for construction enterprises. The activities undertaken in the field of environmental protection are dominated by those which are directly related to the construction activities conducted. For them, activities going beyond that scope, such as supporting initiatives or promoting pro-ecological behaviour, are much less important. There is a visible difference between large enterprises and entities belonging to the two remaining groups. Large enterprises are more inclined to take universal measures which go beyond their construction site. This indicates their important role as potential creators of good practice, setting behaviour patterns throughout the construction sector.

KEY WORDS: CSR, environmental protection, industry sector

Introduction

Environmental degradation, together with other threats from increasing globalisation poses numerous challenges for the construction industry. These include, above all, the risk of losing financial liquidity, the limited supply of skilled labour and the volatility of material prices. These are accompanied by problems relating to the efficiency of natural resources management and the amount of waste and pollution produced. The construction industry is also burdened with numerous health risks for workers. According to the statistics of Statistics Poland (GUS, 2020), it is in the construction industry sector that the highest number of severe and fatal accidents at work occurs. At the same time business partners of construction companies, such as investors, co-operators, banks, insurance companies, and public administration entities more and more often perceive economic entities in terms of their pro-social and environmental activities. Apart from a price, they are guided by confidence in a given company, its image and the manner it operates on the market and in its environment. In pursuing their business goals, enterprises are forced to consider social and environmental issues as equivalent areas of their activity. One of the instruments enabling the integration of the above objectives is the concept of Corporate Social Responsibility (CSR). The implementation of its assumptions may be a source of opportunities to increase competitive advantage, leading at the same time to social and environmental benefits.

The article aims to present the results of research showing the activity of Polish enterprises in the construction industry in implementing the CSR principles. The areas of involvement of these enterprises are analysed, with particular emphasis on activities concerning environmental protection. The article attempts to determine the extent to which construction sector enterprises in Poland undertake CSR activities, what are the types of these activities, and what is the place of actions aimed at limiting the pressure on the natural environment in relation to other CSR activities. Research results show the real importance attached by various size companies of the construction sector to contemporary environmental problems.

An overview of the literature

One of the management instruments, creating conditions for reducing the pressure of the economic system on the environment, is the CSR concept. There are numerous definitions of this concept in the literature (Carroll, 1991, p. 39-48; Aarts, 2011, p. 207-211; Griffin, 2004, p. 118-119). Their

common feature is the reference of business activities to the social needs and requirements of the natural environment. The European Commission defines CSR as the responsibility of enterprises for their impact on society (Commission Communication, p. 7). The ISO 26000 standard defines CSR as the impact of an organisation's decisions and actions on society and the environment through transparent and ethical behaviour in seven areas: 1) organisational governance, 2) human rights, 3) labour practices, 4) environment, 5) fair operating practices, 6) consumer issues, 7) community involvement and development.

Taking actions to reduce the negative impact on society and the environment is particularly important in the case of enterprises belonging to the most burdensome sectors. One of such sectors is construction (Adamczyk and Dylewski, 2010, p. 127). Environmental risks are present at all stages of the construction process from planning and design to operation and finally, demolition. Stawicka-Wałkowska (1998, p. 81) indicates that problems in the construction-environment relations are concentrated around two areas: 1) obtaining natural raw materials in the production process of construction materials and products, and 2) soil, water and air pollution during the operation and disposal of construction works. According to Salih (2013), almost half of the final energy consumption and extracted raw materials, and about one-third of water consumption in the European Union are related to the construction and operation of buildings.

To reduce the negative environmental impact, companies in the construction sector take numerous measures. The most important of these include (Deszcz, 2006; Nauman, 2016, pp. 7-10): proper management of the construction site, making connections, preparing storage yards, dehydrating the construction site, minimising noise and vibrations associated with the use of heavy machinery and equipment, and waste management.

In Poland, the concept of corporate social responsibility has become the subject of consideration and research by many authors. Jung (2010) has attempted to identify the main barriers that hinder the pro-social activity of small enterprises. According to her, the problems result both from the specificity of small enterprises and from the inadequacy of CSR tools to them. The Author stresses that it is necessary to individually adjust actions in the area of corporate social responsibility to how small organisations are managed as well as their economic and human resources. Many studies have been conducted to determine the level of implementation of the social responsibility concept in Polish enterprises (Bartkowiak, 2010, Oczkowska, 2012; Ratajczak, 2015; Wołoszyn, Stawicka and Ratajczak, 2012; Rogowski, 2016; Piskalski, 2015). Wildowicz-Giegiel (2010) presents examples of good practices undertaken in the implementation of CSR principles. The results of the

research conducted by the Author confirmed that in the case of small and medium-sized enterprises, the CSR concept still plays a secondary role. The degree of advancement of the CSR concept implementation in Polish enterprises was included in the continuum model (Rojek-Nowosielska, 2017, p. 103).

Despite the significant impact of construction companies on the social and natural environment and analyses carried out in other countries (e.g. Barnes, Croker, 2013; Duman, Giritli, McDermott, 2016; Petrovic-Lazarevic, 2010; Seriki, 2020; Zahidy, Sorooshian, Hamid, 2019), comprehensive research has not been undertaken so far to identify the involvement of Polish enterprises of this industry in the implementation of the CSR concept and, in particular, to take action to reduce their pressure on ecosystems.

Research methods

The survey covered companies in the construction industry:

- conducting a registered business activity,
- whose activities, in accordance with the Polish Classification of Activities, are carried out under section F, division 41: works related to the erection of buildings,
- are not in bankruptcy or liquidation,
- operating in Poland.

The study investigated companies from three size categories: small (with 10-49 employees), medium (50-249 employees) and large (250 and more employees).

Data on the size of the population were obtained from the studies of Statistics Poland. The sample, due to the lack of an appropriate sampling frame, was selected using a targeted method. The sample size was determined based on two key premises: possibilities of data acquisition and fulfilment of statistical rigour. It was assumed that the minimum sample size in the survey to achieve the objectives of the survey is 100-200 units (Bazarnik et al., 1992, p. 16). Based on the data obtained from EMIS, Amadeus and ALEO databases, a database of enterprises was created, to which invitations to participate in the survey were sent (by mail and e-mail), together with a questionnaire form. Two thousand forty-seven invitations were sent out. Replies were received from 177 companies. The return rate of the questionnaire was 8.65%. The sample was dominated by small enterprises, which constituted almost 60% of the total number of respondents (106 entities). The share of medium-sized enterprises was slightly over 27% (49 entities) and large enterprises, over 12% of the research sample (22 entities) (table 1).

Table 1. Comparison of the structure of the general population and the research sample

Employment volume	Size of the general population	Share of enterprises in the general population [%]	Number of enterprises surveyed	Share of enterprises in the test sample [%]
from 10 to 49	6543	88.55	106	59.89
from 50 to 249	794	10.75	49	27.68
250 and above	52	0.70	22	12.43
Σ	7389	100	177	100

Source: author's work based on GUS (Statistics Poland), 2019.

A diagnostic survey method was used in the study. CAWI (computer-assisted web interview) and PAPI (paper and pen personal interview) techniques were used. The research tool was an original questionnaire form. The research was conducted from February to November 2019. The subject of the research was the corporate social responsibility activities undertaken by enterprises. The analyses were carried out by grouping individual activities into areas distinguished by the ISO 26000 standard and an original set of activities in environmental protection.

Results of the research

In Poland, only 37% of enterprises in the construction sector declare the implementation of CSR principles. Taking into account the size of the company, the CSR concept is implemented primarily in large companies (77%). In the case of medium-sized companies, 43% of the respondents confirmed their involvement in implementing socially responsible activities. Definitely, the lowest number (25%) of companies implementing CSR postulates is in the group of small entities.

Environmental protection is an area of interest declared by 82% of Polish enterprises in the construction industry, which implement the CSR demands. In comparison to other areas, the result should be considered relatively low. The highest percentages of respondents declare undertaking activities in the area of human rights (96%). A slightly smaller group of respondents (91%) declared involvement in activities in the area of organisational governance. Fair operating practices and consumer issues are areas of activity declared by 84% of the respondents. To a lesser extent (67%), activities concerning labour practices are implemented in companies. The least frequently declared are activities in the area of community involvement and development (figure 1).

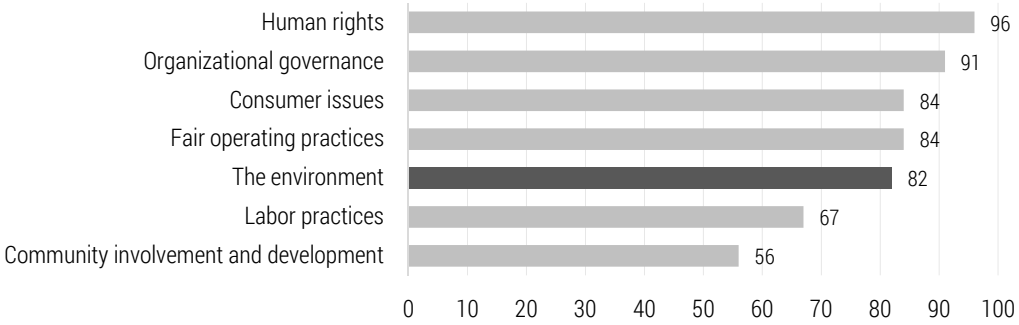

Figure 1. Areas of activity undertaken by construction enterprises implementing CSR principles [% of enterprises declaring activity in particular areas]

Source: author's work.

Environmental protection activities, most often undertaken by the surveyed companies, are those directly related to construction works: proper management of the generated waste, proper preparation of the construction site, securing greenery and selection of appropriate materials. Over 90% of the surveyed enterprises declare that they take conscious actions in this area. Slightly fewer indications were given for other activities, also directly related to the construction works: the selection of environmentally friendly technologies, saving resources (energy, water), reduction of noise emission, and reduction of waste and pollution. These activities were indicated by over 80% of the surveyed entities. The remaining activities, not directly related to construction works, received fewer indications. Offering environmentally friendly services, restrictive observance of environmental regulations and standards, ongoing monitoring of environmental regulations and promoting pro-environmental behaviour among employees, customers, subcontractors and suppliers were indicated by about 70% of the surveyed entities. Support for pro-environmental activities undertaken by other entities received the fewest indications. 68% of the respondents declare actions in this area (figure 2).

The size of the company affects the type of environmental protection measures taken. The smallest variation can be seen in waste management and site development. The percentage of companies declaring to take action in this respect is close to 95% in each size category. In turn, the most significant differences are revealed in the tendency to reduce the amount of generated waste and pollution and in the ongoing monitoring of legal regulations related to environmental protection. In the first case, 100% of large enterprises, 90% of medium-sized, and only 70% of small enterprises declare to take action. In the second case, 91% of large companies, 70% of small, and only 61% of medium-sized enterprises (figure 3).

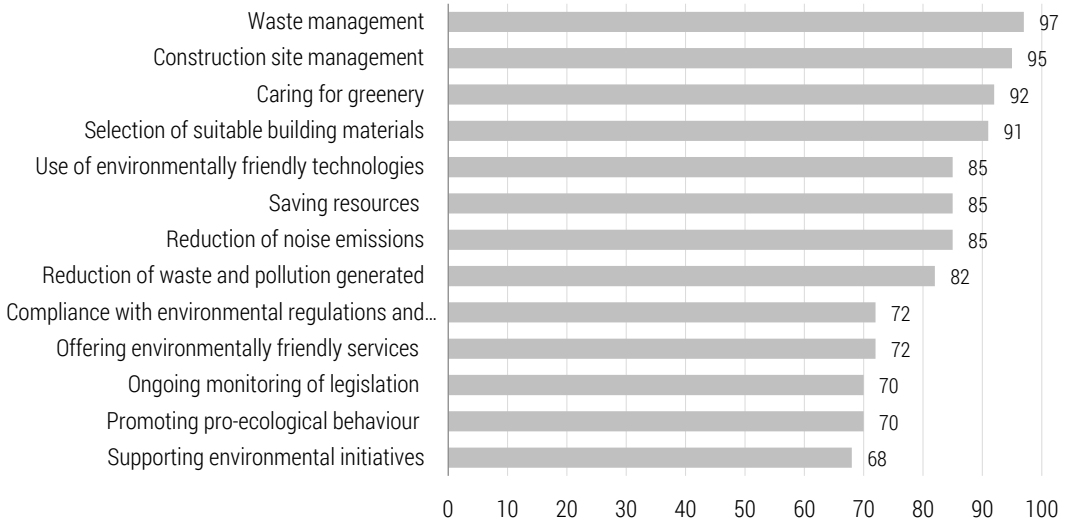

Figure 2. Environmental protection activities declared by construction enterprises implementing CSR principles [% of enterprises declaring individual activities]

Source: author's work.

In the four categories of activity, large companies are much more committed than others. These are reduction of generated waste and pollution, promotion of pro-environmental behaviour among employees, customers, subcontractors and suppliers, ongoing monitoring of environmental regulations and support for environmental initiatives. In these areas, the activity of small and medium-sized enterprises is relatively small.

An essential aspect for small companies is the proper management of waste, including hazardous waste. Socially responsible behaviour was confirmed in this respect by as many as 96% of respondents. Equally important is the proper management of the construction site, making connections and preparing storage yards (94%). Moreover, representatives of small companies declare the use of appropriate building materials (92%). Rarely undertaken activities include: reduction of harmful waste, gases, etc. (75%), promoting pro-environmental behaviour among employees, customers, subcontractors and suppliers (69%), offering environmentally friendly services (72%), ongoing monitoring of new environmental regulations/legislation (70%), compliance with standards, regulations (69%), supporting environmental initiatives (68%).

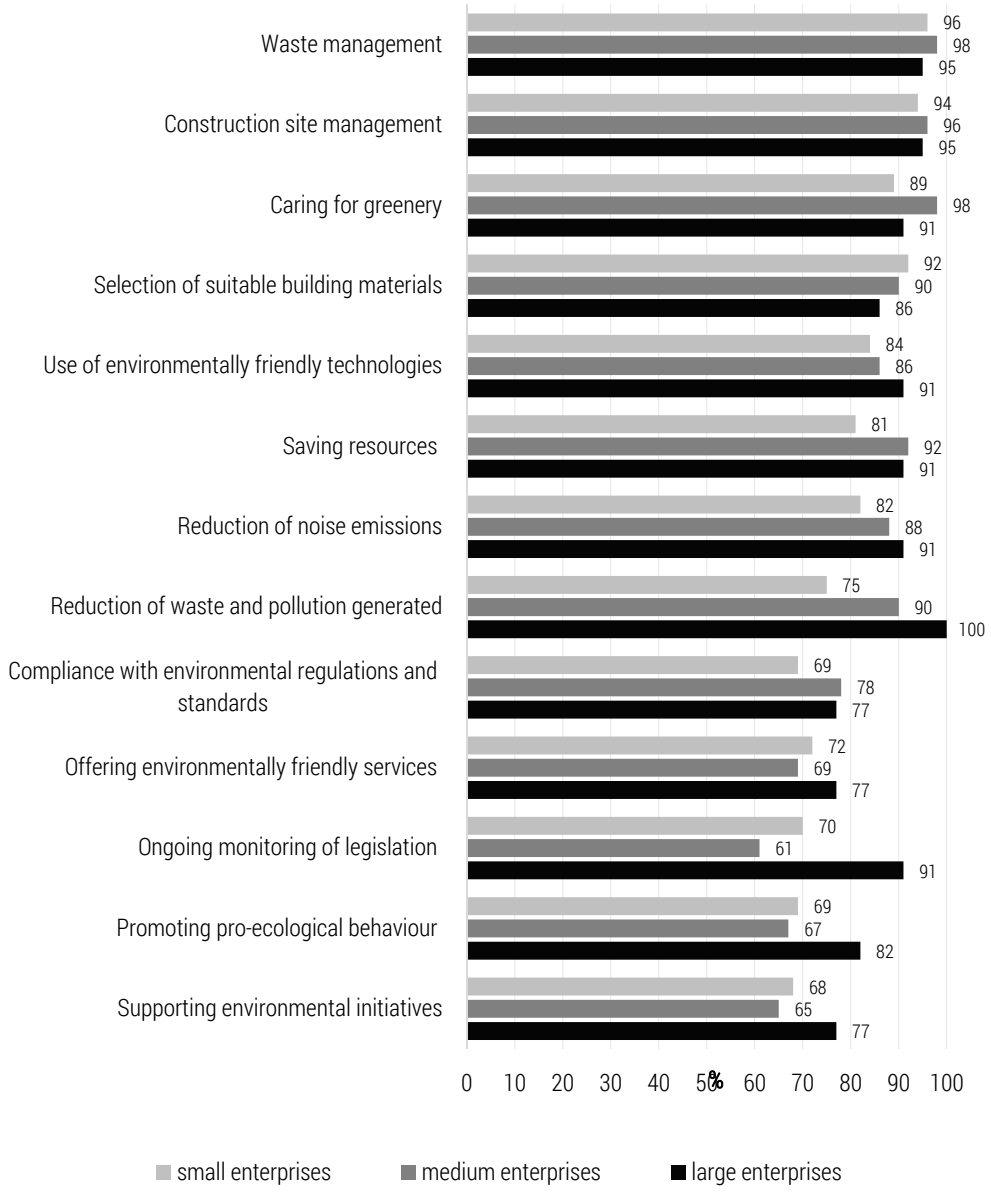

Figure 3. Diversification of environmental protection activities declared by construction enterprises implementing CSR principles, by size categories [% of enterprises declaring individual activities]

Source: author's work.

In medium-sized enterprises, the most widespread activity in the field of environmental protection is taking care of greenery and waste management (98%). The least frequently used methods to reduce the negative impact of the activities of medium-sized companies on the environment are: promoting pro-environmental behaviour among employees, customers, subcontractors, suppliers (67%), offering environmentally friendly services (69%), ongoing monitoring of new environmental laws and regulations (61%), and supporting environmental initiatives (65%).

In large companies, almost all environmental activities are carried out to a huge extent. The most significant involvement of these companies is visible in the reduction of harmful waste and gases, which was confirmed by as much as 100% of the respondents. It is a less common practice among large entities to offer environmentally friendly services, to comply with standards and regulations and to support environmental initiatives. 77% of companies in this category have indicated that they are doing so.

Conclusions

Despite the significant impact of construction sector enterprises on the social and natural environment, CSR principles have so far been of little interest. Enterprises in this sector that implement CSR principles focus on other areas rather than on environmental protection.

The undertaking of environmental protection activities by Polish enterprises in the construction industry should be considered as fulfilling their formal and legal obligations rather than, as one of the definitions of CSR, consciously "taking responsibility for actions for a cleaner environment" (Commission of the European Communities 2001, p. 5). Therefore, the most popular among enterprises in the construction industry, declaring the implementation of CSR principles, are activities directly related to operational processes: proper preparation of the construction site, proper management of the generated waste, or securing greenery facilities. To a much lesser extent, these companies declare undertaking activities not directly related to their current operations: supporting environmental initiatives or promoting pro-ecological behaviour.

Large companies are the leaders in terms of the pro-ecological approach to their entire activity. They are the driving force behind socially responsible activities and activity in the field of environmental protection in the whole sector. Apart from the high level of operational activities related to environmental protection, they also declare other activities in this area. The declarations concerning attempts to minimise the amount of waste and pollution

produced or to seek environmentally friendly technologies are much higher than in the other two categories of enterprises. They also carry out much greater image activities: they support the promotion of pro-ecological behaviour or independent support initiatives in this area. Large companies can play an essential role as a source of good practice and a model of behaviour in this area for the whole industry. Their impact on small and medium-sized entities may manifest itself as a result of direct requirements addressed to smaller business partners within the framework of the agreements concluded, as well as examples of business models that combine the achievement of competitive advantage with the creation of values important for the socio-economic environment.

Among the most important findings made as a result of the research performed are the following:

- identification of the differentiation in the commitment to implementing CSR principles, and the types of CSR activities undertaken by enterprises in the construction sector according to their size,
- establishment of the importance attached by the enterprises surveyed to environmental protection in relation to other areas of CSR,
- identification of types of pro-ecological activities undertaken by the analysed entities,
- definition of the role of large construction companies as a carrier of good practice in this area,
- identification of the needs of enterprises in the construction sector in terms of awareness of CSR principles and the benefits of applying them.

The contribution of the authors

Arnold Bernaciak – 50% (conception), 50% (literature review), 40% (acquisition of data), 60% (analysis and interpretation of data).

Małgorzata Halaburda – 50% (conception), 50% (literature review), 60% (acquisition of data), 40% (analysis and interpretation of data).

References

Aarts, A., 2011. Społeczna odpowiedzialność przedsiębiorstw. In: Sztuka public relations. Z doświadczeń polskich praktyków. Związek Firm Public Relations, Warszawa, 207-211.

Adamczyk, J., Dylewski, R., 2010. Recykling odpadów budowlanych w kontekście budownictwa zrównoważonego. Problemy Ekorozwoju, 5(2), 125-131.

Barnes, L.R., Croker, N., 2013, The relevance of the ISO26000 social responsibility issues to the Hong Kong construction industry. Construction Economics and Building, 13(3), 37-50, DOI: 10.5130/ajceb.v13i3.3280.

Bartkowiak, G., 2010. Działania odpowiedzialne społecznie w średnich przedsiębiorstwach i ich postrzeganie przez studentów i absolwentów wybranych uczelni na terenie Wielkopolski. Problemy Zarządzania, 8(28), 182-201.

Bazarnik, J. et al., 1992. Badania Marketingowe. Metody i Oprogramowanie Komputerowe. Canadian Consortium of Management Schools. Akademia Ekonomiczna w Krakowie, Warszawa-Kraków, 16.

Carroll, A.B., 1991. The pyramid of Corporate Social Responsibility: Toward the moral management of organisational stakeholders. Business Horizons, 34(4), 39-48,

Deszcz, J., 2006. Odpowiedzialność społeczna przedsiębiorcy budowlanego, Buduj z głową. Kwartalnik Kosztorysanta, 1, http://www.bzg.pl/node/334 [02-02-2020].

Duman, D.U. et al., 2016. Corporate social responsibility in construction industry. A comparative study between UK and Turkey. Built Environment and Asset Management, 6(2), 218-231, DOI: 10.1108/BEPAM-08-2014-0039.

Griffin, R.W., 2004. Podstawy zarządzania organizacjami. Wydawnictwo Naukowe PWN, Warszawa.

GUS, 2020. Wypadki przy pracy w 2019 r. – dane wstępne, Warszawa.

GUS, Polska klasyfikacja działalności (PKD 2007), https://stat.gov.pl/Klasyfikacje/doc/pkd_07/pkd_07.htm, [20-11-2019].

International Standard Organization, ISO 26000:2010, Guidance on social responsibility.

Jung, M., 2010. Bariery implementacji koncepcji społecznej odpowiedzialności biznesu w małych przedsiębiorstwach. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, 116, 117-126.

Komunikat Komisji do Parlamentu Europejskiego, Rady, Europejskiego Komitetu Ekonomiczno-Społecznego i Komitetu Regionów – Odnowiona strategia UE na lata 2011-2014 dotycząca społecznej odpowiedzialności przedsiębiorstw (KOM2011) 681.

Nauman, S., 2016. Specyfikacje techniczne wykonania i obioru robót budowlanych. Wymagania ogólne (roboty budowlane), Warszawa, https://bip.men.gov.pl/wp-content/uploads/sites/2/2016/06/ zalacznik-nr-2a-do-siwz-specyfikacja-techniczna-wykonania-i-odbioru-robot-budowlanych.pdf [11-03-2017].

Oczkowska, R., 2012. Społeczna odpowiedzialność biznesu i jej implementacja w polskim handlu. Zeszyty Naukowe, Uniwersytet Ekonomiczny w Krakowie, 880, 79-93.

Petrovic-Lazarevic, S., 2010, Good corporate citizenship in the Australian construction industry. Corporate Governance International Journal of Business in Society, 10(2), 115-128, DOI: 10.1108/14720701011035648.

Piskalski, G., 2015. Społeczna odpowiedzialność biznesu w polskich realiach. Teoria a praktyka, Raport z monitoringu społecznej odpowiedzialności największych polskich przedsiębiorstw. Fundacja CentrumCSR.PL, Warszawa.

Ratajczak, M., 2015. Wdrażanie kluczowych składowych koncepcji CSR w małych i średnich przedsiębiorstwach agrobiznesu z Małopolski. Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Polityka ekonomiczna, 402, 307-317.

Rogowski, R., 2016. Praktyka wdrażania CSR w polskich przedsiębiorstwach w opinii doradców. Annales. Etyka w życiu gospodarczym, 19(1), 37-54, DOI: 10.18778/1899-2226.19.1.03.

Rojek-Nowosielska, M., 2017. Społeczna odpowiedzialność przedsiębiorstw. Model – diagnoza – ocena. Wydawnictwo Uniwersytetu Ekonomicznego we Wroclawiu, Wrocław.

Salih, J., 2013. Impact of the Construction Industry on the Environment, http://www.bimhow.com/impact-of-the-construction-industry-on-the-environment/ [30-01-2015].

Seriki, O.O., 2020. Looking through the African lenses: a critical exploration of the CSR activities of Chinese International Construction Companies (CICCs) in Africa. International Journal of Corporate social Responsibility, 5(8), 2-9, https://doi.org/10.1186/s40991-020-00055-1.

Stawicka-Wałkowska, M., 1998. Ocena wpływu budownictwa i przemysłu materiałów budowlanych na środowisko naturalne w świetle programu „Zrównoważony rozwój". Prace Instytutu Techniki Budowlanej, 2-3, 106-107.

Wildowicz-Giegiel, A., 2010. Implementacja koncepcji społecznej odpowiedzialności biznesu w polskich przedsiębiorstwach. Olsztyn Economic Journal, 5(1), 145-158, DOI 10.2478/v10021-010-0012-4.

Wołoszyn, J. et al., 2012. Społeczna odpowiedzialność małych i średnich przedsiębiorstw agrobiznesu z obszarów wiejskich. Wydawnictwo SGGW, Warszawa.

Zahidy, A.A. et al., 2019, Critical success factors for corporate social responsibility adoption in the construction industry in Malaysia. Sustainability, 11, 1-25, DOI: 10.3390/su11226411.