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## ADVANCES IN THE IMPLEMENTATION OF THE MODEL OF SUSTAINABLE HUMAN RESOURCE MANAGEMENT: POLISH COMPANIES' EXPERIENCES\*

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**Abstract:** Sustainable development is a modern idea of civilization development born out of the need to mitigate and prevent adverse effects of economic activity. Its implementation forces the necessity to change the philosophy of managing organizations by including social and ecological goals in their strategy. Significant support for the implementation of the strategy aimed at achieving the above-mentioned objectives is the concept of Sustainable Human Resource Management. This is due to the fact that personnel processes play an important role in translating sustainable development policy into practice. The purpose of the research is to systematize knowledge regarding sustainable human resource management and to evaluate the scope of practical implementation of the new model of the HR function in Polish Enterprises. The research used a critical analysis of the literature and a diagnostic survey method. The survey was conducted among a random, representative population of 300 Polish enterprises. In the course of the study, it was established that in Polish conditions the model of Sustainable Human Resource Management is implemented in a fragmented way.

**Keywords:** HR Function; Sustainable HRM; Green HRM; Socially Responsible HRM

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**JEL Classifications:** M12, M14, Q56, 015

**Additional disciplines:** ecology and environment

### 1. Introduction

Sustainable development in general is a continuous process of satisfying needs of the present and future generations (Baltgailis, 2019; Vigliarolo, 2020). The idea of sustainable development, viewed as the company's ability to achieve goals and increase the long-term value for the shareholder via economic, environmental and social integration in business strategies, have become vital to the operations of contemporary organizations. The

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concept of sustainability encourages enterprises to implement the sustainable development business model based on the principles of management rooted in value and social responsibility (Jabłoński, Jabłoński 2016), where the HR function may occupy a key role. Human resources management (HRM) is of primary importance for an effective implementation of the principles of sustainable development. HRM strategies create a framework for sustainable development culture by raising employee awareness and shaping desired social-friendly and environment-friendly attitudes (Shama, Sharma, Devi 2009). The recruitment of suitable staff members, the assignment of tasks compliant with the requirements of sustainable development, the conduct of sustainability-related training, and the monitoring of sustainability performance may have a significant effect on the execution of the concept of sustainable development in companies (Mazur 2014).

Becoming aware of this fact translates into an increase in interest in the issue of sustainable human resource management (SHRM) (Jabbour and Santos 2008; Ehnert and Harry 2012; App, Merk, Büttgen 2012; Kozica and Kaiser 2012; Diaz-Carrion et al. 2018). Nonetheless, despite the above, the concept is still pioneering (Stankevičiūtė, Savanevičienė 2018a), whereas the analysis of literature clearly indicates that there is a gap, both in terms of model coherence and empirical research (Mazur 2015; Ehnert et al. 2016). The study intends to bridge this gap, partially at least.

The purpose of the research is to systematize knowledge regarding sustainable human resource management and to evaluate the scope of practical implementation of the new model of the HR function. The method used to meet the objective was a critical review of source literature and a diagnostic survey method. The author contributes to the body of theoretical research on sustainable human resource management and popularizes the SHRM model across organizations.

## **2. Materials and Methods**

The subject matter of the research were environment-friendly and society-oriented human resource practices implemented across Polish enterprises. The purpose of the research is to systematize knowledge regarding sustainable human resource management and to evaluate the scope of practical implementation of the new model of the HR function. The method used to meet the objective was a critical review of source literature and a diagnostic survey method. To achieve the research objectives, the following research questions were set:

- What are the main pillars of Sustainable Human Resource Management?
- How advanced is the implementation of the SHRM model in Polish enterprises?

This study was based on the main research hypothesis that the SHRM model in Polish enterprises is implemented in a limited scope.

In the first stage of research author carried out a systematic literature review. This review considers the research works on and related with 'sustainable HRM' appeared in the literature. This review has used the archival method for data collection, because it enabled the researchers to structure research and builds a reliable knowledge base on existing literatures on and related with sustainable HRM (Thevanes and Arulrajah 2017). On the basis of the literature review, a comparative analysis of SHRM models was carried out.

In the second stage of the study, the results of empiric studies were presented. The survey was conducted in 2018 with the use of the CATI technique among a random, representative population of 300 enterprises. The study sample was selected on a layer basis. First, 50 entities from each of the six Polish regions were drawn: Central, South, East, North-West, South-West and North. The survey targeted individuals in charge of human resource policy development in the enterprises studied. The characteristic features of the study population are shown in Table 1.

**Table 1.** Details of enterprises covered by the research

Criterion	Number of Enterprises	Percentage
Employment number:		
50-249 employees	125	41.7%
250-499 employees	94	31.3%
500-749 employees	33	11.0%
More than 500 employees	48	16.0%
Time on the market:		
up to 3 years	150	50.0%
3-5 years	14	4.7%
5-7 years	8	2.7%
7-9 years	2	0.6%
More than 9 years	126	42.0%
Type of ownership:		
limited liability company	179	59.7%
joint-stock company	52	17.3%
state-owned enterprise	69	23.0%
Scope of operations:		
international	130	43.3%
national	82	27.3%
regional	38	12.7%
local	50	16.7%
Main type of activity:		
services	162	54.0%
production	119	39.7%
trade	19	6.3%

*Source:* own research (raw data in Appendix)

The most frequent type of ownership of young organizations was limited liability company (59.7%). The geographical coverage of the enterprises was highly-diversified, with the most numerous operating globally (43.3%). The prevailing type of business activity of the study entities was the provision of services (54%). The enterprises which prevailed in the population studied were medium-sized, i.e. employing between 50 and 249 employees (41.7%), operating on the market up to 3 years (50.0%). The analysis of research results in the group of young enterprises is presented in another papers (Bombiak, Marciniuk-Kluska 2018; Bombiak, Marciniuk-Kluska 2019).

### 3. SHRM as New Direction of the HR Function Evolution

Human resource management referred to as the HR function is a strategic and coherent approach to the management of the most valuable assets of organizations – their employees (Armstrong 2006). The process of human resource management includes a number of activities, i.e. the planning and selection of staff members, professional adaptation, professional development, evaluation, motivation, and staff reduction. These actions are to create suitable HR resources and fill position with responsible and well-qualified people (Lussier 2008).

For many years, the main goal of HRM was an increase in the shareholder value (Beer, Boselie, Brewster 2015) . Financial performance was treated as the underlying element of an added value generated by HRM, whereas the needs and expectations of staff members were considered of lesser importance (Van De Voorde, Pauwe, Van Veldhoven 2012; Cleveland, Byrne, Cavanagh 2015).

Nowadays, internal and external challenges compel organizations to rethink HRM strategies in a search for the best ways to create value for shareholders (Guest, 2017; Stankevičiūtė, Savanevičienė 2018). One of the new directions of an evolution of the HR function is the model of sustainable human resource management (Enher & Harry 2012; Pocztowski 2016). It is a consequence of the relationship between human resource management and sustainable development (Mariappanadar 2003; Ehnert, Harry & Zink 2014; Kramar 2014). The analysis of international databases show a growing number of studies devoted to SHRM (Figure 1). The literature review shows some difficulties in conceptualization, as well as, different terminologies to link sustainability and HRM (Macke, Genari 2019).

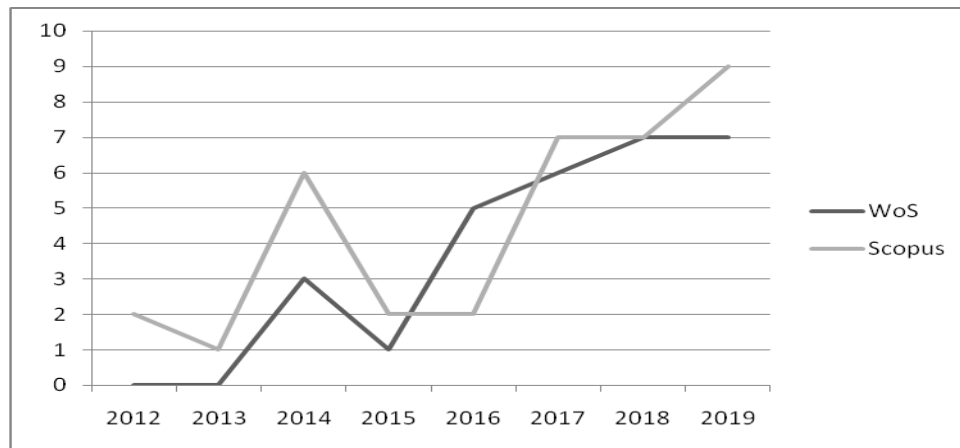


Figure 1. The number of publications containing the term “Sustainable Human Resource Management” in selected databases

SHRM represents a novel approach to human management through the admission of the ability to integrate some potentially contradictory economic, environmental and social goals (Pabian 2015). According to Ehnert, SHRM involves taking up such practices that allow organizations to attain goals in a long-term perspective, while reflecting their great concern for employees (Ehnert 2009). R. Kramar has extended the definition to include the aspect of minimizing the negative effect of enterprise operations on the natural environment, employees and communities (Kramar 2014). The HR policy in this concept is used to promote sustainable use of company resources and to support ecology (Mampra, 2013). A direct consequence of the implementation of this model is sustainable human resource development, i.e. highly qualified, environment- and socially-focused employees who understand and follow the principles of sustainable development throughout their work (Pabian 2011). What is more, SHRM creates a framework which allows one to meet the present-day challenges, such as human resource deficiency or occupational health problems (Stankevičiūtė, Savanevičienė 2018a). Selected definitions of SHRM are presented in the table 2.

Table 2. Definitions of SHRM in the opinion of various authors

Authors	Definitions
Zaugg, Blum & Thom (2001, p.1)	“SHRM is defined by methodological and instrumental approaches whose objectives are long-term-oriented, socially responsible and economically efficient recruiting, training, retaining and disemployment of employees. Increasing employability, guaranteeing a harmonious work-life-balance and enhancing individual responsibility take on an important role in the concept of sustainable human resource management.”
Mariappanadar (2003, p. 910)	“Sustainable HR strategy can be defined as the management of human resources to meet the optimal needs of the company and community of the present without compromising the ability to meet the needs of the future.”
Ehnert (2009, p. 74)	„Sustainable HRM is the pattern of planned or emerging human resource strategies and practices intended to enable an organizational goal achievement while simultaneously reproducing the HR base over a long-lasting

	calendar time and controlling for self-induced side and feedback effects on the HR systems on the HR base and thus on the company it self”
Kramar (2014, p. 1084)	“SHRM could be defined as the pattern of planned or emerging HR strategies and practices intended to enable the achievement of financial, social and ecological goals while simultaneously reproducing the HR base over a long term. It seeks to minimise the negative impacts on the natural environment and on people and communities and acknowledges the critical enabling role of CEOs, middle and line managers, HRM professionals and employees in providing messages which are distinctive, consistent and reflect consensus among decision-makers.”
Ehnert, Parsa, Roper, Wagner & Muller-Camen (2016, p. 90)	“Sustainable HRM can be defined as the adoption of HRM strategies and practices that enable the achievement of financial, social and ecological goals, with an impact inside and outside of the organization and over a long-term time horizon while controlling for unintended side effects and negative feedback.”
Thevanes & Arulrajah (2017, p.3)	“SHRM is the efficient, effective, and innovative applications of human resources and its practices in order to achieve economic (profit), social and environmental goals of an organization in ethical ways and means without compromising the ability of future generations to meet their own needs”.

*Source:* own study based on literature review

**4. Review of the SHRM Models**

According to Zaugg, Blum and Thom (2001), SHRM is built on three pillars: work-life balance, personal autonomy in professional development, and employability of the workers. The underlying objectives of the conceptual model of sustainable human resource management are as follows (Mazur 2017):

- 1) increasing employee employability,
- 2) using participatory management models to enhance individual responsibility,
- 3) ensuring a harmonious work-life-balance.

One can only achieve the above mentioned goals if there is a partnership between the employee and the enterprise.

The model displayed seems to narrow down the SHRM concept a bit, and to account primarily for its social aspect. It emphasizes the balance between work and employees’ personal lives, which is viewed as a guarantee of success i.e. to keep them in an organization. It fails, however, to include the environmental aspect of SHRM.

A more holistic approach, one which tries to grasp the complexity of SHRM, has been presented by De Prins (2011). The author’s suggestion comprises all four dimensions of SHRM:

- sociological perspective,
- psychological perspective,
- strategic perspective,
- green perspective.

Yet another detailed analysis of the model, in addition to an attempt to verify it using a group of European enterprises, has been depicted by I. Rompa (2011). The sociological perspective includes company social policy, health protection and diversity management. The psychological perspective focuses on the maintenance of a balance between staff’s professional and private lives, which enhances worker loyalty and efficiency. As part of the latter perspective, we can enumerate autonomy, self-development and a dialogue with employees. The strategic perspective draws one’s attention to the need of creating a link between SHRM and strategic HRM. Finally, the green perspective is about the development of staff’s environmental awareness, green competence development support, and building a company’s image as an environment-oriented entity (Rompa 2011; Mazur 2015). Hence, we may say that De Prins’ es model constitutes an extension of strategic HRM by the addition of social, ecological and psychological components.

A. Poczowski, in turn, highlights the necessity to notice the following three dimensions of SHRM: social, ecological and economic (Poczowski 2016). The social dimension of SHRM, termed socially responsible HRM

(SRHRM), is a combination of human resource practices and the CSR concept. It is expressed by creating such working environment where staff can attain their professional goals in line with a company strategy (Pocztowski 2016). This involves an optimum use of human resources while respecting employee rights, considering their expectations, and engaging in an active staff-company dialogue. The practical implementation of this dimension is manifested by an observance of ethical principles in relations with employees throughout all stages of the personnel process (from recruitment to de-recruitment). Socially Responsible HRM activities include but are not limited to: (Mazur 2015; Pocztowski 2016; Barrena-Martinez et al. 2017):

- transparent rules of recruitment and selection;
- objectivity of evaluation criteria and gratification;
- fair remuneration – in proportion to employee contribution to work;
- offering employees opportunities to participate in company management;
- comprehensive social benefits;
- investment in employee development;
- diversity management;
- developing harmonious interpersonal relations free of discrimination, mobbing and sexual harassment;
- implementing *work-life-balance* programmes;
- taking care of employees' physical and mental health;
- analysing the needs of staff members.

The ecological dimension of SHRM is referred to as Green Human Resource Management (GHRM). This approach accounts for the ecological context in the process of personnel decision taking (Pabian 2015). Mampra (2013) defines GHRM as use of the HR policy to promote ecology and sustainable resource use in organizations. The primary objective of GHRM is to develop ecological sensitivity in employees and to make them aware of how they can support the environment through their own behaviours. This way, Green HRM supports the creation of a green workforce, who understands, appreciates, and practices ecological initiatives (Opatha & Arulrajah 2014; Mishra, Sarkar & Kiranmai 2014; Ahmad 2015). Green practices motivate employees to become more environment-oriented and help organizations lower operational costs by energy savings, waste reduction and recycling (Jayashree, Sarode 2018).

GHRM is implemented through the following (Mathapati 2013; Renwick et al. 2013; Opatha, Arulrajah 2014; Arulrajah, Opatha, Nawaratne 2015; Ahmad 2015; Bangwal, Tiwari 2015):

- inclusion of tasks related to environmental protection in job descriptions,
- inclusion of environmental criteria in the processes of recruitment and selection,
- development of green competencies,
- inclusion of environmental criteria in performance appraisals,
- encouraging the staff members to get involved with green projects and awarding them for their implementation,
- development of a green discipline of work, i.e. establishing a set of transparent rules and regulations concerning the principles of environmentally sound conduct,
- paying attention to environment-friendly behaviours at work (e.g. reducing paper use in offices, turning off computers, television sets, and lights on leaving the office),
- generating green job positions, the so-called “green-collar workers”.

The economic dimension of SHRM is demonstrated by striving at high work efficiency of individual employees, teams and organizations as a whole (Pocztowski 2016). It leads to the generation of necessary financial means to realize the HR process, including both the social and the environmental aspects (Stankevičiūtė, Savanevičienė 2018a). The economic component of SHRM accounts for the measurement of work efficiency and relations between HRM practices and corporate effectiveness (Pocztowski 2016). It comprises the following activities:

- inclusion of ecological HRM goals in the company strategy,



- measuring HRM efficiency with the application of quality factors (such as loyalty of the staff and satisfaction levels), and quantity factors (employee efficiency, return on investment in human capital, value added from human capital),
- measuring the effectiveness of HR department operations,
- measuring the value of human capital,
- monitoring HRM costs,
- HRM-related reporting.

We ought to stress that one may speak of SHRM only when all three dimensions are involved, i.e. if all the social, ecological and economic dimensions are taken into account in the company HR policy.

An outline of the SHRM model has been presented also by Stankevičiūtė and Savanevičienė (2018a). According to the authors, the SHRM model should account for the following:

- long-term orientation in HRM,
- care of employees,
- care of environment,
- profitability,
- employee participation and social dialogue,
- employee development,
- external partnership,
- flexibility,
- compliance beyond labour regulations,
- employee cooperation,
- fairness and equality.

The core aspects of SHRM are presented in the table 3.

**Table 3.** Characteristics of sustainable human resource management and their core aspects

Characteristic of Sustainable HRM	The Core Aspects
long-term orientation	Identification of the availability of human resources in the future; identification of the needs of the future employees; elimination of the “hire and fire” approach
care of employees	Health and safety management; work-life balance
care of environment	Evaluating the employee performance according to environment-related criteria; fostering “eco-career”; employee rewarding according to environment-related criteria
profitability	Share programmes
employee participation and social dialogue	Different types and forms of participation
employee development	Job rotation; different training forms and methods; the transfer of experience; focus on future skills and employability
external partnership	Cooperation with education system; partnership with all external stakeholders
flexibility	Flexible working arrangements; job rotation
compliance beyond labour regulations	involves employee representatives in many decision-making processes beyond those for which worker participation is a statutory requirement; financial and non-financial support
employee cooperation	Teamwork; good relationships of managers and employees
fairness and equality	Fostering diversity; respectful relationships; fairness as regards as remuneration, career

*Source:* (Stankevičiūtė, Savanevičienė 2018a)

Long-term orientation in HRM allows organizations to specify the availability of human resources in the future. Labour market analyses and forecast have an important role to play here. As part of this consideration given to employees, industrial health and safety management, creating ergonomic workplaces (Moody et al. 2017), work-private life balance provision, fair remuneration and optimum workload are a must.

The care about the environment is associated with a “green” employer image building through actions such as: recruitment and selection of employees demonstrating a high level of ecological awareness and knowledge, training in ecology, or awarding the staff for environment-friendly behaviour. Profitability involves economic efficiency, which is a decisive factor when it comes to the organization’s financial power and its competitiveness. Employee participation and social dialogue comprise an implementation of various forms of staff participation in company management.

Employee development is yet another proof of viewing employees as “change agents” rather than “repositories of knowledge”. In the SHRM model, employee-related expenses are treated not as costs but rather as a form of investment which may convert into an added value in the future. External partnership involves a close cooperation with the labour market, educational institutions, non-governmental institutions, and even employees’ family members to ensure a “reproduction” of human resources.

Flexibility is both quantitative flexibility, i.e. flexible workforce (of temporary staff) and flexible working hours, and functional flexibility which is acquired by staff rotation in job positions. Compliance beyond labour regulations means that SHRM may not confine itself to compliance with the binding law. Instead, it ought to reach out beyond the obligatory practices.

The SHRM model must be based on employee cooperation, for it favours knowledge exchange and trust building, which in turn bring about more benefits than competing. Fairness and equality indicate that the same rules and laws binding for all members of organizations (Stankevičiūtė and Savanevičienė 2018a).

On the basis of the conducted review of the SHRM model, it may be concluded that there has been no uniform approach to the implementation of sustainability in the HR function area. On the one hand, we ought to stress that the models cited do not conflict – they are mutually complementary. Their complementarity causes every single model to contribute to the SHRM concept and facilitate its understanding. On the other hand, the lack of one coherent model affects the scope of idea’s practical implementation.

## **5. Implementation of the SHRM Model in Polish Enterprises**

The objective of the study was to assess the scope of implementation of the SHRM model under Polish conditions. Figure 2 presents the socially-oriented practices implemented in the studied enterprises.



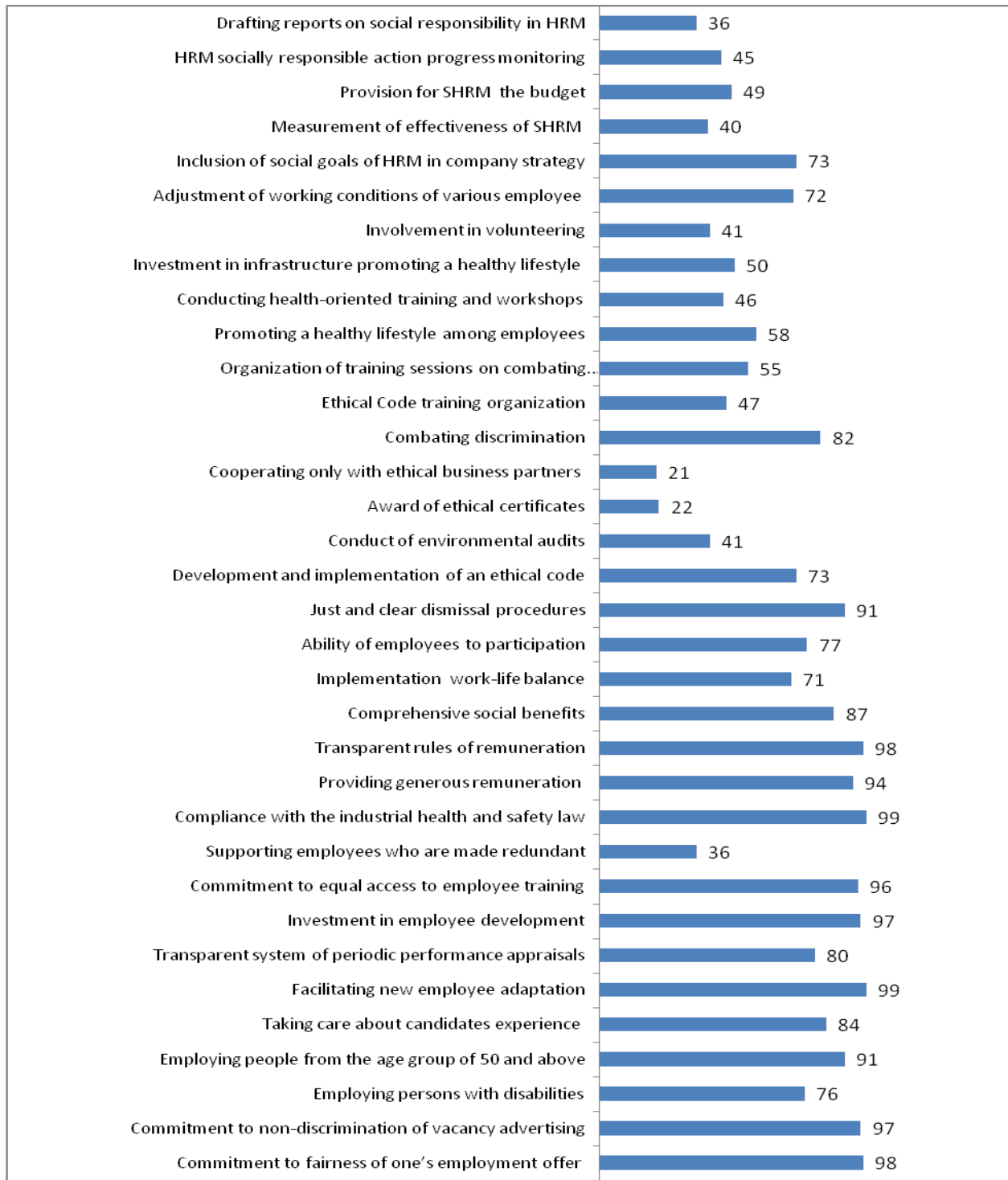


Figure 2. Implementation of socially-oriented HRM practices in Polish enterprises N=300 (data in %)

Source: own research

The analysis revealed that actions involving the social component of SHRM were executed relatively often in Polish enterprises. The most popular ones were:

- compliance with the industrial health and safety law and supporting new staff member adaptation (99%);
- commitment to fairness of one's employment offer and transparent rules of remuneration (98%);
- no discriminatory contents in recruitment ads and investment in employee development and equal access to training (97%);
- provision of generous remuneration to staff members (94%).

Among the less frequently followed activities were: employment of 50+ staff members (91%), comprehensive social benefits (87%) and taking care about candidates experience (84%). Less than a half of the studied entities (45%) monitored progress in HRM socially responsible actions and conducted ethical code trainings. Even fewer companies, only 41%, created employee volunteering opportunities and measured the effectiveness of socially responsible actions in HRM (40%). Only 1/3 of the analysed units drafted socially responsible HRM reports and supported employees who are made redundant. Similar results were obtained by analyzing socially-oriented practices in the group of young enterprises (Bombiak, Marciniuk-Kluska 2019).

The second component of SHRM is Green HRM. Figure 3 presents the environment-friendly practices performed in the HRM field in the studied enterprises. The analysis of the scope of implementation of the ecological component of SHRM showed that the most popular activity was encouraging environmental-friendly attitudes when performing professional tasks (such as office paper use reduction, waste sorting).

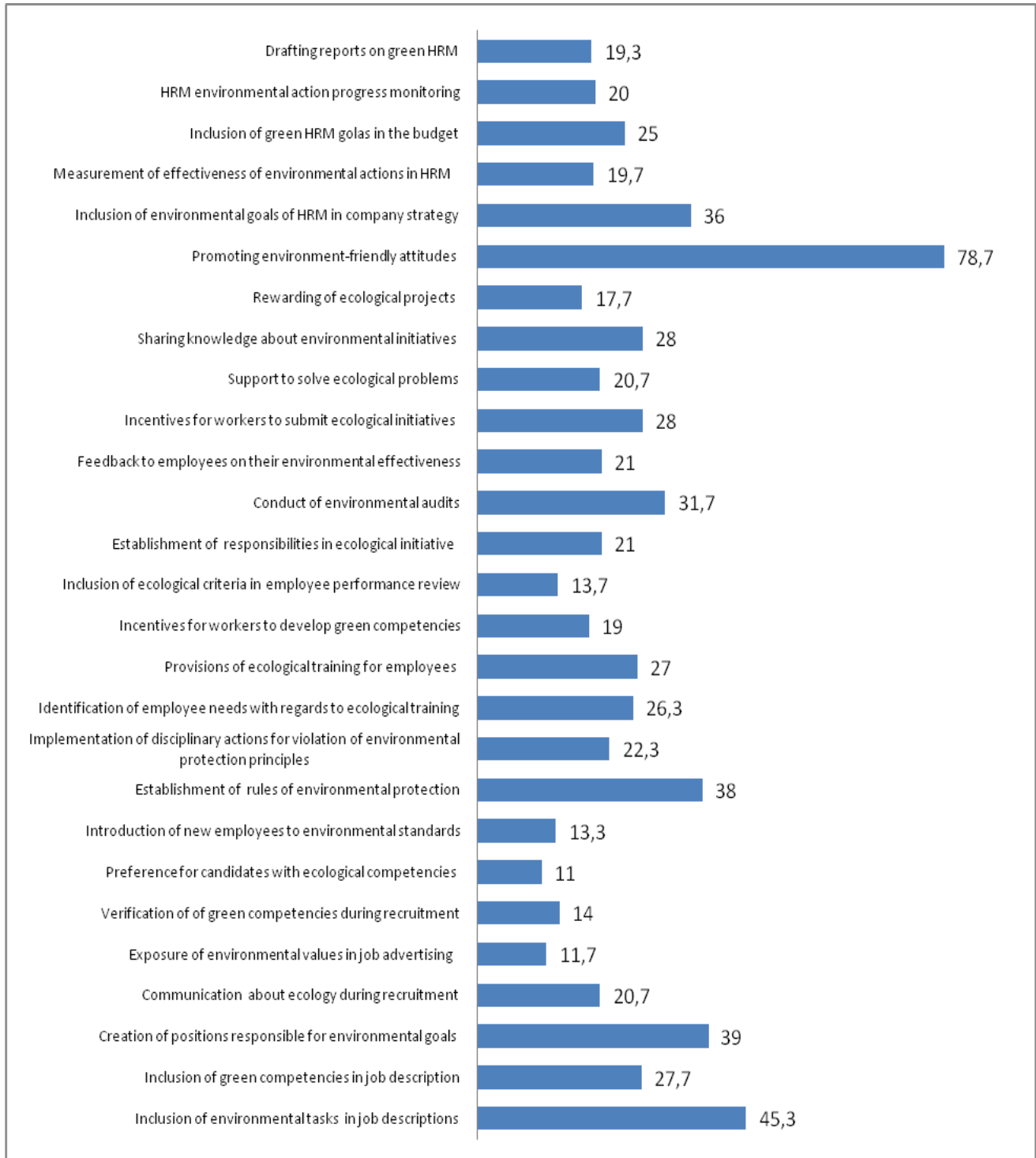
This practice was implemented relatively often – in as many as 78,7% of the study entities. Less than a half of the analysed enterprises (45,3%) accounted for tasks related to environmental protection in job descriptions. The following actions were pursued even less often (Bombiak, 2019):

- creation of positions responsible for environmental goals (39%)
- establishment of a clear set of rules conduct in relation to environmental protection (38%);
- inclusion of environmental goals of HRM in the company strategy (36%);
- conduct of environmental audits (31,7%).

Merely one-fourth of the studied companies identify of employee needs with regards to ecological training inclusion and inclusion of green HRM goals in the budget. It was equally rare to see companies measure the effectiveness of environment-friendly actions (19,7%) and to report on pro-environmental actions in HRM (19,3%). The smallest group of respondents carried out the following actions (Bombiak 2019):

- preference given to candidates with competencies and experience in ecological project performance (11%);
- exposure of environmental values in job vacancy advertising (11,7%);
- verification of candidate ecological knowledge and skills during the recruitment process (14%).

Similar results were obtained by analyzing environment-friendly practices in the group of young enterprises (Bombiak, Marciniuk-Kluska 2018).



**Figure 3.** Implementation of environment-friendly HRM practices in Polish enterprises N=300 (data in %)

Source: own study

## 6. Discussion

The new challenge contemporary enterprises need to face is to transform conventional human resource management into its sustainable counterpart. It is particularly important in view of future generations (Pabian 2015).

Against this background, it is difficult to speak of a comprehensive implementation of the SHRM model in Polish enterprises. Within the social component, we can see a relatively low popularity of actions related to the implementation of socially responsible HRM practices, such as progress monitoring, or the reporting and measuring the effectiveness of socially responsible actions in HRM. As far as the ecological component is concerned, there is a rather poorly developed range of “green” practices. Green recruitment-related activities are among those particularly rare ones. The reason behind it might be, above all, the deficit of knowledge about pro-environmental human resource practices. The analysis of the source literature indicates that the GHRM concept is relatively unknown in Poland (Bombiak and Marciniuk- Kluska 2018). Furthermore, we ought to highlight that the implementation of sustainable practices may not necessarily be evidence of SHRM model execution. At times, it is a consequence of a corporate need to improve one’s image. Such a phenomenon was confirmed by studies conducted both in Poland (Głuszek 2013) and Romania (Obrad 2018).

Other studies show similar results. Variable levels of implementation of sustainable HR practices were observed in Germany, Spain, Sweden and the United Kingdom (Diaz-Carrion 2018). In a group of practices viewed as crucial in relation to SHRM, the dominant one was the provision of balance between work and private life (Diaz-Carrion et al. 2018) and commitment to employee health and safety (Guerci and Pedriniego 2014; Stankevičiūtė and Savanevičienė 2018b). On the other hand, the analysis of websites of 50 organizations – members of the European Business Council for Sustainable Development (WBCSD) – reveal that the actions undertaken most frequently as part of SHRM are stress reduction and prevention, and work-life balance (Enhert 2009). Enhert et al.’s analysis of reports developed by 250 largest global companies according to the Forbes demonstrates that reporting involving sustainable HRM has a limited scope. The data provided most often were employment numbers (92%), employee structure by gender, age and other differentiating criteria (90%), health and safety at work (84%), and average numbers of hours devoted to employee training per annum (79%) (Enhert et al. 2016). The above suggests a reduced area of SHRM practical implementation. In the non-profit sector, such moderate implementation of sustainable HRM can also be noted. This is further evidenced by the study of Rawashdeh (2018) carried out in Jordanian hospitals. The research conducted by Diaz-Carron et al. (2018) reveals that a crucial role in SHRM practices implementation is played by the national institutional context.

Fears of the management concerning sustainable development involvement and social responsibility are yet other major barriers to the SHRM model implementation. A research study conducted amongst senior managers in 560 large companies demonstrates that these fears are associated with short-term profitability (59.7%), conflicts between economic and social goals (53.9%), and consumer price increase (41.4%) (Certo, Certo 2009). What is more, a number of executives is afraid that engagement in sustainable development will affect more commercially-oriented undertakings by stock depletion. And it is not possible to introduce sustainable HRM without the consent and knowledge of the board (Pabian 2015).

To overcome these fears, one must become aware of the benefits of the SHRM model implementation. Paillé et al. (2014) stresses that there is a direct and profound relationship between HRM practices, environmental effectiveness and organizational efficiency. Studies conducted in the year 2016 in 376 Pakistani companies demonstrate that HRM sustainable practices, especially Green HRM, may significantly increase work efficiency. In the course of the said research, a positive correlation between green recruitment and environmentally-friendly trainings and organizational efficiency was found (Bhutto, Aurazzeb 2016). Major emphasis in subject literature is placed on GHRM in the implementation of the Environmental Management System, which is a strategic tool

for gaining competitive advantage in contemporary organizations (Dubey, Gupta 2018; Kar, Praharaj 2017). GHRM implementation allows one to equip organizations with employees with high level “green” skills. It leads to *green teams*, *green leadership* and *green culture* development (Jabbour et al. 2011; Dubey, Gupta 2018) reinforces company orientation at effective use of natural resources by the reduction of wasteful use, energy saving and recycling, which brings positive effects not only in terms of environment but also in terms of economy by cost reduction (Patil, Sarode 2018), increase in efficiency (Arulrajah et al. 2015; Renwick et al. 2013) and improvement of financial results (Mishra et al. 2014). Given the foregoing, it can be said that sustainable HRM is a critical step for gaining sustainable competitive advantage by contemporary organizations. Analyses conducted by Tabatabaei et al. (2017) reveal that SHRM provides an opportunity of achieving long-term business success in a complex and dynamic business context.

All in all, the level of implementation of HR practices within the scope of the SHRM model is variable. The theoretical body of knowledge on Sustainable HRM is still in its early stages too. Sustainable HRM is a new phenomenon within management systems and thus implementation methodologies are still developing (Tabatabaei et al. 2017).

### **Conclusions**

SHRM is a novel model of personnel function execution, the essence of which is to strike a balance between the economic rationality and social and ecological responsibility. It is aimed at supporting the society-oriented and environment-friendly corporate policy by the acquisition of suitable staff members and the development of their engagement in projects beneficial to the environment and the society. This model favours mechanisms and processes leading to the use of human resources to ensure balance at the level of organizations. Its implementation seems necessary, should organizations wish to achieve the goals of sustainable development.

More and more entrepreneurs seem to see the need to implement the SHRM model and the rationale behind it. There is still a lot to do in order to be able to talk about its practical implementation. The analysis of the level of implementation of the SHRM model in Polish enterprises demonstrated that it was a fragmented arrangement. There are clear disproportions between its social and ecological components. Even though there is a considerable interest in the execution of social practices, environment-friendly practises are not a commonly established canon. A conclusion to be drawn upon the above data is that the SHRM model is not fully implemented under Polish conditions. It is evident that there is no systemic approach to the implementation, the consequence of which is that only a selection of sustainable human resource practices is executed.

This means that the model is in early development. For the SHRM to be mature, a holistic approach must be applied. This implies that actions such as recruiting sustainable employees, broadening employee knowledge about sustainability, encouraging employees to undertake socially- and environmentally-oriented actions and rewarding them for the effects produced, become a constant element of the HR policy. They should be neither occasional nor selective.

According to the author of the research, a pivotal role in the expansion of SHRM model implementation is occupied by the management and the way in which managers view the role of the human factor in the achievement of the goals of sustainable development. A major barrier to the SHRM model, either delaying its implementation or resulting in a lack of decisions to implement it, may be a shortage of persons having the competencies to manage the HR function in line with sustainability principles. In addition, the fact that managers are often oriented at short-term outcomes also presents a risk for concept popularization in time of economic uncertainty. Needless to say, SHRM is a long-term HR strategy oriented at the application of the HR policy instruments to build sustainable organizations. In principle, the benefits that the strategy will bring – often

multidimensional and quite uneasy to quantify – can be reaped only in a more distant future. Another factor of disadvantage to SHRM model implementation is the deficit of financial means which oftentimes discourages managers from developing strategic plans encompassing not only the economic, but also the environmental and social dimension. The growth of the concept’s popularity, however, does contribute to an increase in the number of studies devoted to SHRM. That is why, further analyses and research in the field are required and so is the demonstration of good practices that favour – via benchmarking – a broader SHRM model implementation in organizations.

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**Appendix.** List of analyzed enterprises and their profiles

Enterprise's coded name <sup>1</sup>	Employment number	Type of ownership	Line of business according to the Polish Classification of Activities (PKD) <sup>2</sup>	Scope of operations	Time on the market	Net profit generated by the enterprise in the last calendar year
1	250-499	limited liability company	Non-specialized wholesale	international	More than 9 years	PLN 1000,000 - 4,999,000
2	250-499	limited liability company	Freight transport by road	international	1-3 years	More than PLN 5,000,000
3	50-249	limited liability company	Research and development activities - health care	international	1-3 years	PLN 1000,000 - 4,999,000
4	250-499	limited liability company	Manufacture of pasta and similar farinaceous foods	international	1-3 years	PLN 1000,000 - 4,999,000
5	50-249	state-owned enterprise	Management of basic types of public activity	local	1-3 years	under PLN 50,000
6	250-499	limited liability company	Processing of plastic products	international	1-3 years	More than PLN 5,000,000
7	50-249	limited liability company	Building works related to erection of residential and non-residential buildings	regional	1-3 years	PLN 500,000 - 999,000
8	750-999	limited liability company	Manufacture of plastic packaging	regional	More than 9 years	PLN 1000,000 - 4,999,000
9	250-499	limited liability company	Non-specialized wholesale	national	1-3 years	PLN 1000,000 - 4,999,000
10	250-499	limited liability company	Building works related to erection of residential and non-residential buildings	international	More than 9 years	PLN 1000,000 - 4,999,000
11	500-749	state-owned enterprise	Fire service activities	local	1-3 years	PLN 100,000 -499,000
12	250-499	state-owned enterprise	Management of basic types of public activity	regional	1-3 years	PLN 500,000 - 999,000
13	50-249	state-owned enterprise	Management of real estate	local	3-5 years	PLN 100,000 -499,000
14	1000-2000	limited liability company	Higher education institutions	international	More than 9 years	More than PLN 5,000,000
15	500-749	limited liability company	Manufacture of plastic packaging	international	More than 9 years	PLN 1000,000 - 4,999,000
16	50-249	limited liability company	Other personal service activities not elsewhere classified	local	1-3 years	PLN 1000,000 - 4,999,000
17	50-249	state-owned enterprise	Activities supporting education	local	Up to 1 year	PLN 50,000 - 99,000
18	50-249	limited liability company	Manufacture of other furniture	international	1-3 years	PLN 500,000 - 999,000
19	50-249	state-owned enterprise	Manufacture of other electronic and electric wires and cables	international	Up to 1 year	PLN 100,000 -499,000
20	50-249	limited liability company	Financial leasing	international	1-3 years	PLN 500,000 - 999,000
21	50-249	limited liability company	Processing and preserving of poultry meat	regional	3-5 years	PLN 1000,000 - 4,999,000
22	50-249	limited liability company	Other software publishing	international	1-3 years	PLN 100,000 -499,000
23	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 100,000 -499,000
24	50-249	limited liability company	Treatment and coating of metals	international	1-3 years	under PLN 50,000
25	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 50,000 - 99,000
26	50-249	limited liability company	Private security activities, excluding security systems service activities	national	1-3 years	PLN 100,000 -499,000
27	50-249	limited liability company	Computer games publishing	national	1-3 years	PLN 500,000 - 999,000
28	250-499	limited liability company	Manufacture of metal parts and plastics	national	3-5 years	PLN 1000,000 - 4,999,000
29	50-249	limited liability company	Rental and operation of own or leased real estate	regional	More than 9 years	PLN 100,000 -499,000
30	50-249	limited liability company	Manufacture of computers and peripheral equipment	national	1. Do 1 roku	PLN 100,000 -499,000
31	50-249	limited liability company	Other retail sale of new goods in specialized stores	national	1-3 years	PLN 50,000 - 99,000
32	50-249	limited liability company	Manufacture of other goods not elsewhere classified	national	1-3 years	PLN 1000,000 - 4,999,000
33	50-249	limited liability company	Other forms of artistic education	national	1-3 years	PLN 1000,000 - 4,999,000
34	250-499	limited liability company	Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate	national	1-3 years	PLN 1000,000 - 4,999,000
35	50-249	joint-stock company	Book publishing	national	1. Do 1 roku	PLN 100,000 -499,000
36	50-249	limited liability company	Manufacture of other goods not elsewhere classified	regional	More than 9 years	PLN 1000,000 - 4,999,000
37	50-249	limited liability company	Manufacture of electric motors, generators and transformers	international	More than 9 years	PLN 1000,000 - 4,999,000
38	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 50,000 - 99,000
39	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 100,000 -499,000
40	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	under PLN 50,000

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41	50-249	limited liability company	Manufacture of other goods not elsewhere classified	local	More than 9 years	PLN 500,000 - 999,000
42	50-249	limited liability company	Manufacture of metal structures and their parts	national	1-3 years	PLN 500,000 - 999,000
43	50-249	state-owned enterprise	Activities supporting education	local	3-5 years	PLN 100,000 - 499,000
44	50-249	joint-stock company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 500,000 - 999,000
45	50-249	joint-stock company	Motion picture, video and television program production activities	international	More than 9 years	PLN 100,000 - 499,000
46	250-499	joint-stock company	Other activities auxiliary to financial services, except insurance and pension funding	national	More than 9 years	More than PLN 5,000,000
47	250-499	limited liability company	Programming of industrial robots	international	More than 9 years	More than PLN 5,000,000
48	250-499	limited liability company	Sawmilling and planning of wood	international	More than 9 years	PLN 100,000 - 499,000
49	50-249	state-owned enterprise	Activities supporting education	regional	Up to 1 year	PLN 100,000 - 499,000
50	1000-2000	limited liability company	Wholesale of grain, raw tobacco, seeds and animal feeds	national	More than 9 years	PLN 100,000 - 499,000
51	50-249	limited liability company	Motion picture, video and television program distribution activities	national	Up to 1 year	PLN 100,000 - 499,000
52	50-249	limited liability company	Motion picture projection activities	national	More than 9 years	PLN 100,000 - 499,000
53	50-249	limited liability company	Activities supporting education	local	1-3 years	PLN 500,000 - 999,000
54	50-249	limited liability company	Manufacture of other goods not elsewhere classified	national	1-3 years	PLN 100,000 - 499,000
55	50-249	limited liability company	Retail sale of flowers, plants, seeds, fertilizers, pet animals and pet food in specialized stores	international	1-3 years	PLN 100,000 - 499,000
56	50-249	limited liability company	Distribution of food products	international	More than 9 years	PLN 100,000 - 499,000
57	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 100,000 - 499,000
58	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 100,000 - 499,000
59	50-249	state-owned enterprise	Activities supporting education	local	Up to 1 year	PLN 500,000 - 999,000
60	50-249	state-owned enterprise	Activities supporting education	regional	1-3 years	PLN 100,000 - 499,000
61	50-249	limited liability company	Book publishing	national	1-3 years	PLN 100,000 - 499,000
62	50-249	limited liability company	Software-related activities	international	1-3 years	PLN 100,000 - 499,000
63	50-249	limited liability company	Non-specialized wholesale of foods, drinks and tobacco products	international	1-3 years	More than PLN 5,000,000
64	50-249	joint-stock company	Works related to construction of roads and motorways	international	1-3 years	PLN 500,000 - 999,000
65	50-249	limited liability company	IT equipment management activities	international	More than 9 years	PLN 100,000 - 499,000
66	50-249	limited liability company	Life insurances	national	Up to 1 year	PLN 100,000 - 499,000
67	50-249	limited liability company	Manufacture of plastic packaging	international	4, 5-7 lat	PLN 100,000 - 499,000
68	50-249	state-owned enterprise	Activities supporting education	regional	1-3 years	PLN 50,000 - 99,000
69	50-249	state-owned enterprise	Regulation of activities related to health care, education, cultural services and other social services	local	1-3 years	PLN 100,000 - 499,000
70	50-249	limited liability company	Other forms of loan provision	national	1-3 years	PLN 100,000 - 499,000
71	250-499	limited liability company	Manufacture of cosmetic products and toiletries	international	More than 9 years	PLN 500,000 - 999,000
72	50-249	limited liability company	Wired telecommunication activities	international	Up to 1 year	PLN 500,000 - 999,000
73	50-249	limited liability company	Other forms of loan provision	national	1-3 years	PLN 100,000 - 499,000
74	50-249	limited liability company	Freight transport by road	international	1-3 years	PLN 100,000 - 499,000
75	50-249	state-owned enterprise	Manufacture of plastic packaging	international	More than 9 years	PLN 50,000 - 99,000
76	50-249	limited liability company	Hairdressing and other beauty treatment	national	1-3 years	PLN 100,000 - 499,000
77	50-249	limited liability company	Agents involved in the sale of fuels, ores, metals and industrial chemicals	local	Up to 1 year	PLN 100,000 - 499,000
78	50-249	limited liability company	Repair and maintenance of finished metal products	national	1-3 years	PLN 500,000 - 999,000
79	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 100,000 - 499,000
80	50-249	joint-stock company	News agency activities	national	1. Do 1 roku	PLN 100,000 - 499,000
81	250-499	joint-stock company	Freight transport by road	international	1-3 years	PLN 50,000 - 99,000
82	50-249	state-owned enterprise	Primary schools	local	More than 9 years	PLN 100,000 - 499,000
83	50-249	limited liability company	Other publishing activities	international	1-3 years	PLN 100,000 - 499,000
84	50-249	state-owned enterprise	Justice and judicial activities	regional	1-3 years	PLN 100,000 - 499,000
85	50-249	limited liability company	Manufacture of other furniture	international	1-3 years	PLN 500,000 - 999,000
86	50-249	limited liability company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 100,000 - 499,000
87	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 50,000 - 99,000
88	50-249	state-owned enterprise	Manufacture of other electronic and electric wires and cables	local	More than 9 years	PLN 100,000 - 499,000
89	50-249	limited liability company	Wholesale of metals and metal ores	international	1-3 years	More than PLN 5,000,000
90	50-249	state-owned enterprise	Educational activities	local	Up to 1 year	under PLN 50,000
91	50-249	state-owned enterprise	Activities supporting education	local	1-3 years	PLN 50,000 - 99,000
92	50-249	limited liability company	Manufacture of jewelry and related articles	international	1-3 years	PLN 100,000 - 499,000
93	50-249	state-owned enterprise	Treatment and disposal of non-hazardous waste	regional	1-3 years	PLN 100,000 - 499,000
94	50-249	limited liability company	Other forms of loan provision	national	Up to 1 year	PLN 100,000 - 499,000
95	50-249	limited liability company	Security and commodity contracts brokerage	national	1-3 years	PLN 100,000 - 499,000
96	250-499	state-owned enterprise	Higher education institutions / Educational activities	local	1-3 years	PLN 50,000 - 99,000
97	50-249	limited liability company	Manufacture of central heating radiators and boilers	national	1-3 years	PLN 50,000 - 99,000
98	250-499	state-owned enterprise	Hospital activities	national	More than 9 years	PLN 50,000 - 99,000
99	250-499	limited liability company	Urban and suburban passenger land transport	local	1-3 years	PLN 100,000 - 499,000
100	More than 2000	state-owned enterprise	Higher education institutions / Educational activities	international	More than 9 years	PLN 100,000 - 499,000
101	500-749	joint-stock company	Manufacture of air and spacecraft and related machinery	international	More than 9 years	PLN 1000,000 - 4,999,000
102	250-499	joint-stock company	Service activities incidental to land transportation	local	More than 9 years	PLN 100,000 - 499,000
103	1000-2000	limited liability company	Manufacture of medical and dental instruments and supplies	national	More than 9 years	PLN 50,000 - 99,000
104	50-249	state-owned enterprise	Justice and judicial activities	national	1-3 years	PLN 100,000 - 499,000
105	1000-2000	limited liability company	Manufacture of concrete products for construction purposes	national	More than 9 years	PLN 100,000 - 499,000
106	250-499	state-owned enterprise	Regulation of activities related to health care, education, cultural services and other social services, except for social security	national	More than 9 years	PLN 100,000 - 499,000
107	750-999	state-owned enterprise	Management of basic types of public activity	international	More than 9 years	PLN 50,000 - 99,000
108	250-499	limited liability company	Manufacture of paper and cardboard	international	1-3 years	More than PLN 5,000,000
109	250-499	joint-stock company	Other forms of loan provision	national	1-3 years	PLN 500,000 - 999,000
110	250-499	state-owned enterprise	Hospital activities	national	More than 9 years	PLN 50,000 - 99,000
111	500-749	joint-stock company	Production of gaseous fuels	international	More than 9 years	under PLN 50,000
112	1000-2000	joint-stock company	Manufacture of musical instruments	international	More than 9 years	More than PLN 5,000,000
113	500-749	limited liability company	Freight transport by road	national	5-7 years	PLN 100,000 - 499,000
114	50-249	limited liability company	Manufacture of other furniture	international	1-3 years	PLN 500,000 - 999,000
115	250-499	state-owned enterprise	Higher education institutions / Educational activities	international	More than 9 years	PLN 100,000 - 499,000
116	500-749	limited liability company	Other research and experimental development on natural sciences and engineering	international	More than 9 years	PLN 50,000 - 99,000
117	1000-2000	joint-stock company	Manufacture of other goods not elsewhere classified	international	More than 9 years	More than PLN 5,000,000
118	250-499	limited liability company	Manufacture of plastic packaging	international	1-3 years	PLN 100,000 - 499,000
119	50-249	joint-stock company	Manufacture of medical and dental instruments and supplies	international	More than 9 years	PLN 100,000 - 499,000
120	1000-2000	limited liability company	Manufacture of pig iron, ferro-alloys, basic iron and steel and metallurgical articles	international	More than 9 years	PLN 1000,000 - 4,999,000
121	250-499	limited liability company	Freight transport by road	national	More than 9 years	PLN 500,000 - 999,000
122	50-249	joint-stock company	Other passenger land transport not elsewhere classified	local	1-3 years	PLN 50,000 - 99,000
123	1000-2000	joint-stock company	Installation of industrial machinery, equipment and fittings	international	1-3 years	PLN 1000,000 - 4,999,000
124	250-499	limited liability company	Manufacture of other parts and accessories for motor vehicles excluding motorcycles	international	1-3 years	PLN 100,000 - 499,000
125	500-749	joint-stock company	Electrical installation	national	More than 9 years	PLN 500,000 - 999,000
126	500-749	joint-stock company	Precious metals production	international	More than 9 years	More than PLN 5,000,000
127	50-249	limited liability company	Growing of cereals, leguminous crops and oil plants, for seeds, except rice	national	1-3 years	PLN 100,000 - 499,000
128	250-499	state-owned enterprise	Urban and suburban passenger land transport	local	1-3 years	under PLN 50,000
129	500-749	limited liability company	Manufacture of metal elements of building woodwork	international	More than 9 years	More than PLN 5,000,000
130	50-249	state-owned enterprise	Business and other management consultancy activities	regional	1-3 years	PLN 100,000 - 499,000
131	1000-2000	joint-stock company	Manufacture of industrial gases	international	More than 9 years	PLN 1000,000 - 4,999,000



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132	250-499	limited liability company	Wireless telecommunication activities, except satellite telecommunication	national	1-3 years	More than PLN 5,000,000
133	250-499	limited liability company	Retail sale of clothing in specialized stores	international	1-3 years	PLN 100,000 - 4,999,000
134	250-499	limited liability company	Manufacture of dyes and pigments	international	More than 9 years	PLN 100,000 - 499,000
135	50-249	limited liability company	Primary aluminum production	national	More than 9 years	PLN 100,000 - 499,000
136	250-499	limited liability company	Manufacture of other outerwear	international	More than 9 years	PLN 500,000 - 999,000
137	50-249	state-owned enterprise	Higher education institutions / Educational activities	regional	1-3 years	PLN 100,000 - 499,000
138	500-749	joint-stock company	Manufacture of cocoa, chocolate and sugar confectionery	international	More than 9 years	PLN 100,000 - 4,999,000
139	250-499	limited liability company	Manufacture of other goods not elsewhere classified	international	More than 9 years	PLN 50,000 - 99,000
140	250-499	limited liability company	Other forms of loan provision	national	More than 9 years	More than PLN 5,000,000
141	250-499	state-owned enterprise	Higher education institutions / Educational activities	regional	More than 9 years	PLN 50,000 - 99,000
142	50-249	state-owned enterprise	Management of basic types of public activity	local	1-3 years	PLN 100,000 - 499,000
143	250-499	limited liability company	Manufacture of other outerwear	international	1-3 years	More than PLN 5,000,000
144	250-499	limited liability company	Manufacture of paper and cardboard	national	1-3 years	PLN 100,000 - 4,999,000
145	250-499	limited liability company	Manufacture of other electronic and electric wires and cables	international	More than 9 years	PLN 100,000 - 4,999,000
146	1000-2000	joint-stock company	Electrical energy generation	national	More than 9 years	More than PLN 5,000,000
147	250-499	joint-stock company	Manufacture of games and toys	international	More than 9 years	PLN 500,000 - 999,000
148	1000-2000	limited liability company	Manufacture of consumer electronics	international	More than 9 years	More than PLN 5,000,000
149	250-499	limited liability company	Water collection, treatment and supply	local	1-3 years	PLN 100,000 - 4,999,000
150	50-249	limited liability company	Manufacture of office and shop furniture	international	More than 9 years	PLN 100,000 - 499,000
151	500-749	limited liability company	Manufacture of (tele)communication equipment	international	1-3 years	More than PLN 5,000,000
152	50-249	state-owned enterprise	Other research and experimental development on natural sciences and engineering	international	1-3 years	under PLN 50,000
153	250-499	limited liability company	Works related to construction of roads and motorways	regional	More than 9 years	PLN 100,000 - 4,999,000
154	50-249	limited liability company	Works related construction of other civil and water engineering facilities not elsewhere classified	regional	1-3 years	PLN 100,000 - 4,999,000
155	More than 2000	joint-stock company	Production and processing of petroleum refining products	international	More than 9 years	More than PLN 5,000,000
156	50-249	joint-stock company	Building works related to erection of residential and non-residential buildings	regional	1-3 years	PLN 100,000 - 4,999,000
157	500-749	joint-stock company	Satellite telecommunication activities	national	1-3 years	More than PLN 5,000,000
158	1000-2000	limited liability company	Wholesale of parts and accessories for motor vehicles excluding motorcycles	international	More than 9 years	More than PLN 5,000,000
159	50-249	limited liability company	Business and other management consultancy activities	national	1-3 years	PLN 500,000 - 999,000
160	500-749	limited liability company	Manufacture of office and shop furniture	international	3-5 years	More than PLN 5,000,000
161	250-499	limited liability company	Wholesale of china, ceramics and glassware and cleaning materials	national	More than 9 years	More than PLN 5,000,000
162	250-499	limited liability company	Other forms of loan provision	national	More than 9 years	More than PLN 5,000,000
163	750-999	joint-stock company	Wholesale clothing and footwear	international	5-7 years	More than PLN 5,000,000
164	250-499	limited liability company	Production of fruit and vegetables	international	5-7 years	PLN 500,000 - 999,000
165	250-499	state-owned enterprise	Higher education institutions / Educational activities	regional	3-5 years	PLN 50,000 - 99,000
166	250-499	state-owned enterprise	Accounting, bookkeeping and auditing activities; tax consultancy	local	1-3 years	PLN 100,000 - 499,000
167	250-499	limited liability company	Steam, hot water and air conditioning manufacture and supply	local	1-3 years	More than PLN 5,000,000
168	250-499	joint-stock company	Manufacture of veneer sheets and wood-based panels	international	3-5 years	PLN 100,000 - 4,999,000
169	More than 2000	joint-stock company	Production of meat products except for poultry meat	international	More than 9 years	More than PLN 5,000,000
170	750-999	limited liability company	Software-related activities	international	More than 9 years	More than PLN 5,000,000
171	500-749	limited liability company	Management of basic types of public activity	local	More than 9 years	More than PLN 5,000,000
172	500-749	limited liability company	Processing and preserving of poultry meat	international	More than 9 years	More than PLN 5,000,000
173	50-249	limited liability company	Hotels and similar accommodation	regional	1-3 years	PLN 100,000 - 4,999,000
174	500-749	limited liability company	Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes	national	More than 9 years	More than PLN 5,000,000
175	250-499	state-owned enterprise	Management of basic types of public activity	national	1-3 years	PLN 50,000 - 99,000
176	250-499	limited liability company	Manufacture of plastic packaging	international	1-3 years	PLN 100,000 - 4,999,000
177	250-499	limited liability company	Manufacture of other outerwear	international	5-7 years	More than PLN 5,000,000
178	250-499	joint-stock company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 100,000 - 4,999,000
179	500-749	limited liability company	FMCG food industry	international	More than 9 years	More than PLN 5,000,000
180	More than 2000	limited liability company	Urban and suburban passenger land transport	regional	More than 9 years	PLN 100,000 - 4,999,000
181	250-499	limited liability company	Retail sale of meat and meat products in specialized stores	regional	3-5 years	PLN 100,000 - 499,000
182	750-999	limited liability company	Manufacture of railway locomotives and rolling stock	international	More than 9 years	More than PLN 5,000,000
183	More than 2000	limited liability company	Intermediation in the sale of advertising space in electronic media (Internet)	international	More than 9 years	More than PLN 5,000,000
184	50-249	limited liability company	Restaurants and other eateries	local	1-3 years	PLN 100,000 - 4,999,000
185	750-999	limited liability company	Manufacture of rubber tires and tubes; retreading and rebuilding of rubber tires	international	More than 9 years	PLN 100,000 - 4,999,000
186	250-499	state-owned enterprise	Management of basic types of public activity	national	More than 9 years	PLN 50,000 - 99,000
187	50-249	limited liability company	Specialist medical practice	national	1-3 years	PLN 100,000 - 4,999,000
188	50-249	limited liability company	Production of meat products except for poultry meat	national	1-3 years	PLN 100,000 - 4,999,000
189	250-499	limited liability company	Other personal service activities not elsewhere classified	national	1-3 years	PLN 100,000 - 4,999,000
190	250-499	limited liability company	Management of basic types of public activity	national	More than 9 years	More than PLN 5,000,000
191	50-249	state-owned enterprise	Fire service activities	national	1-3 years	under PLN 50,000
192	50-249	limited liability company	Activities supporting education	local	1-3 years	PLN 100,000 - 499,000
193	50-249	limited liability company	Collection of non-hazardous waste	regional	1-3 years	PLN 100,000 - 4,999,000
194	250-499	state-owned enterprise	Justice and judicial activities	regional	1-3 years	PLN 100,000 - 499,000
195	250-499	limited liability company	Long-distance passenger rail transport	local	More than 9 years	More than PLN 5,000,000
196	50-249	limited liability company	Beverage preparation and serving	national	More than 9 years	PLN 100,000 - 499,000
197	250-499	limited liability company	Warehousing and storing of other goods	national	1-3 years	More than PLN 5,000,000
198	250-499	limited liability company	Other transport agency activities	national	1-3 years	PLN 500,000 - 999,000
199	250-499	limited liability company	Sale of cosmetic products	international	7-9 years	More than PLN 5,000,000
200	50-249	joint-stock company	Manufacture of plastic plates, sheets, tubes and profiles	international	2. 1-3 lat	PLN 100,000 - 4,999,000
201	1000-2000	joint-stock company	Manufacture of oils and other fluid fats	international	More than 9 years	More than PLN 5,000,000
202	50-249	limited liability company	Software-related activities	international	1-3 years	PLN 50,000 - 99,000
203	500-749	joint-stock company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 100,000 - 4,999,000
204	1000-2000	limited liability company	Production of fruit and vegetables	national	More than 9 years	More than PLN 5,000,000
205	50-249	limited liability company	Manufacture of oils and other fluid fats	local	More than 9 years	PLN 100,000 - 499,000
206	250-499	limited liability company	Warehousing and storing of gas fuels	national	3-5 years	More than PLN 5,000,000
207	50-249	limited liability company	Production of fruit and vegetable juice	national	1-3 years	PLN 50,000 - 99,000
208	50-249	limited liability company	Works related to transmission pipelines and distribution networks	national	More than 9 years	PLN 50,000 - 99,000
209	250-499	joint-stock company	Wholesale of chemical products	national	1-3 years	PLN 500,000 - 999,000
210	250-499	state-owned enterprise	Other professional, scientific and technical activities not elsewhere classified	regional	1-3 years	PLN 50,000 - 99,000
211	1000-2000	limited liability company	Manufacture of air and spacecraft and related machinery	international	3-5 years	PLN 100,000 - 4,999,000
212	50-249	state-owned enterprise	Business and other management consultancy activities	regional	1-3 years	PLN 100,000 - 499,000
213	250-499	state-owned enterprise	Activities of employment placement and headhunting	regional	More than 9 years	PLN 100,000 - 499,000
214	500-749	joint-stock company	Other processing and preserving of fruit and vegetables	national	More than 9 years	More than PLN 5,000,000
215	50-249	limited liability company	Other passenger land transport not elsewhere classified	national	1-3 years	PLN 100,000 - 4,999,000
216	750-999	joint-stock company	Steam, hot water and air conditioning manufacture and supply	regional	More than 9 years	PLN 100,000 - 4,999,000
217	500-749	joint-stock company	Life insurances	national	More than 9 years	More than PLN 5,000,000
218	50-249	limited liability company	Steam, hot water and air conditioning manufacture and supply	local	1-3 years	PLN 500,000 - 999,000
219	500-749	limited liability company	Manufacture of other furniture	international	More than 9 years	More than PLN 5,000,000
220	250-499	joint-stock company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 100,000 - 499,000

221	250-499	state-owned enterprise	Water collection, treatment and supply	local	5-7 years	PLN 50,000 - 99,000
222	1000-2000	limited liability company	Manufacture of soap and detergents, cleaning and polishing preparations	international	More than 9 years	PLN 1000,000 - 4,999,000
223	250-499	state-owned enterprise	Justice and judicial activities	regional	More than 9 years	PLN 50,000 - 99,000
224	1000-2000	joint-stock company	Residential building	international	1-3 years	More than PLN 5,000,000
225	50-249	state-owned enterprise	Activities supporting education	regional	1-3 years	PLN 50,000 - 99,000
226	50-249	limited liability company	Manufacture of electronic elements	international	1-3 years	PLN 500,000 - 999,000
227	250-499	limited liability company	Manufacture of knitted and crocheted hosiery	international	More than 9 years	PLN 500,000 - 999,000
228	500-749	limited liability company	Treatment and coating of metals	international	More than 9 years	More than PLN 5,000,000
229	500-749	state-owned enterprise	Fire service activities	local	More than 9 years	PLN 50,000 - 99,000
230	500-749	limited liability company	Other forms of loan provision	regional	More than 9 years	More than PLN 5,000,000
231	50-249	limited liability company	Manufacture of other outerwear	international	1-3 years	PLN 1000,000 - 4,999,000
232	250-499	limited liability company	Higher education institutions / Educational activities	national	More than 9 years	PLN 500,000 - 999,000
233	50-249	limited liability company	Silviculture and other forestry activities, excluding gathering of forestry products	local	1-3 years	PLN 500,000 - 999,000
234	250-499	joint-stock company	Manufacture of refractory products	international	More than 9 years	More than PLN 5,000,000
235	250-499	limited liability company	Wireless telecommunication activities, except satellite telecommunication	international	More than 9 years	PLN 1000,000 - 4,999,000
236	50-249	limited liability company	Manufacture of cocoa, chocolate and sugar confectionery	international	1-3 years	PLN 50,000 - 99,000
237	1000-2000	limited liability company	Manufacture of other goods not elsewhere classified	international	3-5 years	More than PLN 5,000,000
238	50-249	limited liability company	Tool production	national	1-3 years	PLN 1000,000 - 4,999,000
239	1000-2000	limited liability company	Manufacture of knitted and crocheted hosiery	international	More than 9 years	PLN 500,000 - 999,000
240	250-499	limited liability company	Milk processing and cheese production	national	More than 9 years	PLN 500,000 - 999,000
241	250-499	limited liability company	Manufacture of tobacco products	international	More than 9 years	More than PLN 5,000,000
242	500-749	limited liability company	Manufacture of pig iron, ferro-alloys, basic iron and steel and metallurgic articles	international	More than 9 years	More than PLN 5,000,000
243	50-249	state-owned enterprise	Management of basic types of public activity	local	1-3 years	PLN 50,000 - 99,000
244	500-749	limited liability company	Higher education institutions / Educational activities	international	More than 9 years	More than PLN 5,000,000
245	More than 2000	joint-stock company	Large volume chemical production	international	More than 9 years	PLN 1000,000 - 4,999,000
246	250-499	state-owned enterprise	Works related to construction of roads and motorways	regional	1-3 years	PLN 50,000 - 99,000
247	250-499	limited liability company	Urban and suburban passenger land transport	local	More than 9 years	PLN 1000,000 - 4,999,000
248	50-249	limited liability company	Hotels and similar accommodation	regional	More than 9 years	under PLN 50,000
249	250-499	state-owned enterprise	Service activities related to office administration	international	More than 9 years	PLN 500,000 - 999,000
250	500-749	limited liability company	Renovation activities	international	More than 9 years	More than PLN 5,000,000
251	50-249	limited liability company	Restaurants and other eateries	regional	More than 9 years	PLN 1000,000 - 4,999,000
252	1000-2000	joint-stock company	Security services	national	More than 9 years	PLN 500,000 - 999,000
253	500-749	limited liability company	Works related construction of other civil and water engineering facilities not elsewhere classified	national	1-3 years	More than PLN 5,000,000
254	250-499	joint-stock company	Steam, hot water and air conditioning manufacture and supply	local	1-3 years	More than PLN 5,000,000
255	500-749	limited liability company	Manufacture of other builders' carpentry and joinery	international	More than 9 years	More than PLN 5,000,000
256	1000-2000	limited liability company	Casting of steel	international	More than 9 years	PLN 1000,000 - 4,999,000
257	50-249	limited liability company	Manufacture of other goods not elsewhere classified	international	1-3 years	PLN 1000,000 - 4,999,000
258	50-249	limited liability company	Retail sale in non-specialized stores with food, beverages or tobacco predominating	local	1-3 years	PLN 100,000 - 499,000
259	50-249	limited liability company	Private security activities, excluding security systems service activities	local	1-3 years	PLN 50,000 - 99,000
260	250-499	limited liability company	Hospital activities	local	More than 9 years	under PLN 50,000
261	250-499	limited liability company	Higher education institutions / Educational activities	national	More than 9 years	PLN 1000,000 - 4,999,000
262	50-249	joint-stock company	Manufacture of hollow glass	international	1-3 years	PLN 500,000 - 999,000
263	50-249	joint-stock company	Engineering activities and related technical advisory services	national	More than 9 years	PLN 50,000 - 99,000
264	250-499	limited liability company	Furniture production	international	1-3 years	PLN 1000,000 - 4,999,000
265	250-499	joint-stock company	Urban and suburban passenger land transport	regional	Up to 1 year	More than PLN 5,000,000
266	500-749	state-owned enterprise	Management of basic types of public activity	regional	3-5 years	PLN 50,000 - 99,000
267	750-999	limited liability company	Manufacture of knitted and crocheted hosiery	international	More than 9 years	More than PLN 5,000,000
268	250-499	limited liability company	Manufacture of pig iron, ferro-alloys, basic iron and steel and metallurgic articles	international	1-3 years	PLN 1000,000 - 4,999,000
269	More than 2000	limited liability company	Manufacture of other goods not elsewhere classified	international	More than 9 years	under PLN 50,000
270	More than 2000	limited liability company	Manufacture of finished textile products	international	More than 9 years	More than PLN 5,000,000
271	250-499	joint-stock company	Engineering activities and related technical advisory services	international	1-3 years	PLN 500,000 - 999,000
272	1000-2000	limited liability company	Production of other primary inorganic chemicals	international	More than 9 years	PLN 1000,000 - 4,999,000
273	50-249	limited liability company	General medical practice	local	1-3 years	PLN 500,000 - 999,000
274	750-999	limited liability company	Manufacture of games and toys	international	More than 9 years	under PLN 50,000
275	250-499	limited liability company	Manufacture of metal structures and their parts	international	More than 9 years	PLN 1000,000 - 4,999,000
276	250-499	limited liability company	Civil engineering	international	More than 9 years	More than PLN 5,000,000
277	250-499	state-owned enterprise	Other research and experimental development on natural sciences and engineering	international	1-3 years	PLN 50,000 - 99,000
278	More than 2000	limited liability company	Activities of employment placement and headhunting	international	7-9 years	PLN 1000,000 - 4,999,000
279	250-499	limited liability company	Manufacture of other electronic equipment	international	1-3 years	PLN 1000,000 - 4,999,000
280	250-499	limited liability company	Manufacture of explosives	national	1-3 years	More than PLN 5,000,000
281	50-249	state-owned enterprise	Manufacture of rubber tires and tubes; retreading and rebuilding of rubber tires	regional	1-3 years	under PLN 50,000
282	50-249	limited liability company	Steam, hot water and air conditioning manufacture and supply	local	1-3 years	PLN 1000,000 - 4,999,000
283	1000-2000	limited liability company	Other forms of loan provision	national	More than 9 years	More than PLN 5,000,000
284	250-499	joint-stock company	Freight transport by road	national	1-3 years	More than PLN 5,000,000
285	More than 2000	joint-stock company	Manufacture of rubber tires and tubes; retreading and rebuilding of rubber tires	international	5-7 years	More than PLN 5,000,000
286	500-749	limited liability company	Ice-cream production	international	3-5 years	PLN 1000,000 - 4,999,000
287	500-749	joint-stock company	Non-specialized wholesale	national	More than 9 years	More than PLN 5,000,000
288	250-499	limited liability company	Management of real estate on a fee or a contract basis	national	1-3 years	PLN 1000,000 - 4,999,000
289	250-499	limited liability company	Other retail sale of clothing in non-specialized stores	regional	More than 9 years	More than PLN 5,000,000
290	More than 2000	joint-stock company	Mining of other non-ferrous metal ores	international	1-3 years	More than PLN 5,000,000
291	250-499	limited liability company	Management of real estate	regional	More than 9 years	PLN 500,000 - 999,000
292	1000-2000	state-owned enterprise	Justice and judicial activities	national	More than 9 years	PLN 50,000 - 99,000
293	1000-2000	joint-stock company	Mining of lignite	national	More than 9 years	More than PLN 5,000,000
294	250-499	limited liability company	Retail sale of metal products, paint and glass in specialized stores	national	More than 9 years	More than PLN 5,000,000
295	500-749	limited liability company	Manufacture of other special-purpose machinery not elsewhere classified	international	1-3 years	More than PLN 5,000,000
296	1000-2000	limited liability company	Manufacture of ceramic sanitary fixtures	international	More than 9 years	More than PLN 5,000,000
297	1000-2000	joint-stock company	Other monetary intermediation	national	More than 9 years	More than PLN 5,000,000
298	1000-2000	limited liability company	Manufacture of other construction materials	international	More than 9 years	More than PLN 5,000,000
299	50-249	limited liability company	Steam, hot water and air conditioning manufacture and supply	national	5-7 years	PLN 50,000 - 99,000
300	250-499	limited liability company	Manufacture of other metal goods not elsewhere classified	international	More than 9 years	PLN 1000,000 - 4,999,000

<sup>1</sup> To ensure anonymity of the research, the names of the participating enterprises have been coded

<sup>2</sup> PKD – *Polska Klasyfikacja Działalności* (Polish Classification of Activities)- is the Polish division/classification of the types of socio-economic activities pursued by business entities



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