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The Directions of Interrelations Between the Company's Performance and Corporate Social Responsibility (CSR) Activities

Abstract: The interrelations between engagement in CSR activities and the company's performance are still one of pivotal managerial problems. Ample findings related to this issue seem to reveal a rather hazy than clear picture. In this paper, an attempt has been made to complement this problematic issue with the results of the survey conducted among a group of Polish large and medium-sized family businesses. The aim of the paper is to analyse relationships between the self-assessment of the company's performance and its engagement in various CSR activities. It seems to be interesting to identify what kind of relationship and mutual influences can be found between the company's economic and non-economic activities and whether its value aspects, in their broad meaning, exist. To identify this relationship, two groups of linear regression models were adopted (CSR activities or the self-assessment of the company's performance as dependent variables). The ultimate conclusion drawn seems to confirm that the problematic area mentioned above should be described rather by a circular than linear direction of influences which were called a multilevel chain of interferences.

Keywords: family businesses, CSR, Company's Finance Performance, Corporate Social Performance

JEL: C21, L25, M14

1. Introduction

Within the assumption of Neoclassical Economy, the prime objective of companies is profit maximisation. It is achieved when marginal revenues equal marginal costs and the created total amount of profits is the biggest (Kowal, 2013: 2). However, this approach has been undermined over decades by the results of company surveys. On the one hand, market practice shows that a method to calculate value of products or services is to add a profit margin above the total cost of production. It is debatable whether this kind of approach goes in line with the neoclassical rule of profit maximisation. Yet, it may be viewed as a minor technical issue. From a broader perspective, it is argued that the profit maximisation rule ignores, among others, the timing of return, the risk of cash-flow streams, as well as extra-profits made by monopolies, and it is not consistent with the particular interests of various stakeholders in the company (*Criticisms...*, 2012). Furthermore, taking into account interrelations among stakeholders, the prerequisites of agency theory are present as reasons that hamper the maximisation of profits (Hussain, 2012: 316). Moreover, companies are often focused more on objectives different than profits. As examples, the following can be cited (Gruszecki, 2002: 161–164):

- 1) to be one's own boss,
- 2) to maintain the control of the company,
- 3) to realise innovative projects,
- 4) to achieve other things than profits (e.g.: by non-profit organisations),
- 5) to meet public needs (utility companies, municipal business entities, etc.).

Similar considerations have been shown by others scholars. Noga has pointed out that apart from profits the company is focused on its value, liquidity, managerial goals (the amount of sales revenue, representative expenses), behaviour goals, as well as on self-realisation, prestige, success and job creation (Noga, 2009: 22). Komorowski has emphasised that between the company's main objectives and supportive (intrinsic) aims a relevant structure should be created. Moreover, mutual relations inside the structure of the goals are important to the same extent, as they refer to interdependencies among personal, material, financial and other economic issues (Komorowski, 2011: 211). According to the literature review, profits as a measure of companies' performance have been questioned especially by management theories (Gruszecki, 2002: 166). As alternative goals which are crucial for managers, the following were indicated (Crossan, 2005: 2):

- 1) revenue maximisation – the premise of Baumol's model,
- 2) maximisation of utility for managers through an increase of discretionary expenses –Williamson's model,
- 3) maximisation of growth – Marrias' model.

In behavioural theories, a company consists of a number of decision makers, many of whom would have different objectives. Stakeholders within an organisa-

tion may be interested in profits, sales, market share, inventory and production, thus companies would aim for a satisfactory level of profits and pursue other objectives at the same time (Crossan, 2005: 4).

The model presented above as the third one (maximisation of growth) appears to be accurate at present because the protection of the company's sustainable growth is connected with the creation of the company's value. It is clearly noticeable in the group of listed companies (Kozłowska, 2006: 25). However, the problem runs far deeper because the notion of 'value' bears various meanings and it could be understood as the value for customers, users, employees, shareholders, and members of the organisation who are not owners but they may represent another kind of asset for a particular group of stakeholders. As Brillman has said, today's companies are assessed most frequently in terms of four different 'values': value for the shareholders, value for customers, value for the staff, and value for society (Brilman, 2002: 38). In this vague situation, some considerations and an in-depth discussion could be initiated all over again. A general debate related to the meaning of the company's goals is accompanied by a more profound analysis that attempts to fill some particular gaps in the current knowledge. In particular, it is debatable whether the company's various objectives are cohesive and mutually supportive and whether their simultaneous realisation acts in favour of the company's general development or whether they are contradictory and result in the deterioration of the company's economic position.

Our approach in this field encompasses the connections and relations between the implementation of CSR and different aspects of economic ratios as well as indicators in Polish companies. The study was conducted on the group of medium-sized and large enterprises that represented all industries according to the Industry Classification Benchmark (ICB)¹. We seek to open a new scope for enterprise analysis to find out what mutual relation between various occurrences are. Further on, the presented results are meant to provide arguments confirming the mechanisms of creation or mitigation of long term growth. Additionally, they have some impact on long term growth and the likelihood of additional value creation for the company.

The paper is organised as follows: first we point out a theoretical background related to Company's Finance Performance (CFP) and Corporate Social Performance (CSP) core issues and various ties between the company's accomplishments and Corporate Social Responsibility (CSR) engagement. On this base we formulate our research hypotheses. Subsequently, we present the methodology of the study, i.e. the description of the sample, the variables used and the models adopted in the numerical analyses conducted. In the next step, we present the final models achieved and describe the main findings and conclusions.

1 The data used in this paper were collected within the National Science Centre project, no 2012/07/B/HS4/00455, Corporate governance, ownership structure and other financial issues of family enterprises in Poland and Austria – a comparative analysis.

2. Problem formulation

Bowen is considered to be the first scientist and researcher who recommended implementing the subject of ‘social responsibility’ into the company’s management and strategic planning (Bowen, 1953). That is why 1953 is seen as the beginning of the development of the modern approach to different areas of socio-ethical behaviour inside and outside the company. Over decades scientists and practitioners have presented an incommensurable number of various ideas, concepts, divisions and definitions referred to CSR. The complexity of this issue is reflected by the vastness of different definitions. Dahlsrud has presented the analysis of 37 various definitions that exist in the literature (Dahlsrud, 2006). He has concluded that the concept of CSR is based on the following five values: social, economic, voluntary, and environmental, as well as the values connected with the traits of stakeholders. All of these groups of values were combined in the definition formulated and presented by the Commission of the European Communities in 2002. It indicates that Corporate Social Responsibility is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on voluntary basis (*Corporate Social...*, 2002: 5). Obviously, it could be assumed as debatable which concept is more or less relevant because other definitions emphasise to a greater or lesser extent other qualities of CSR indicated above. The definition-related problems, however, are not a pivotal issue in this paper, hence they will not be considered in a more in-depth way. And so, regardless of the definition used, it is interesting to find out whether there are any mutual interrelations between CSR undertakings and the company’s achievements. The question posed seems to be essential, especially taking into account a standpoint that CSR is recognised as a source of calculable and real expenses and quite ‘incommensurable advantages’. The last statement is obviously an oversimplification because of the divergences in various results of studies. Having conducted the meta-analysis² of 52 studies, Orlitzky, Schmidt, Rhynes have concluded that the positive relation between CSR and finance performances is moderated by the methods which can be applied to operationalise both phenomena. The authors have pointed out that the relationship between social and financial performance is mutual rather than one-dimensional and they influence each other in the form of ‘virtuous cycle’ (Orlitzky, Schmidt, Rhynes, 2003: 403–441). Weber has presented the revision of 80 studies which shows that positive relations account for slightly more than 50%, while other connections are non-significant, mixed or negative (Weber, 2008: 248). Similar considerations have been presented by Arnold, who collected and presented the results of several surveys in this area (Arnold,

2 Meta-analysis is a statistical method which combines the results of a number of different studies in order to make an evaluation based on a bigger sample and which can deliver a stronger conclusion than any single study.

2008). Further study proves that there is no sound evidence which would confirm a positive interrelation (Brammer, Millington, 2008; Pelozo, 2009; Smith, Lensen, 2009; Mishra, Damodar, 2010). Additionally, it should be mentioned that engagement in CSR activities by over 11% of surveyed companies in Poland has been recognised as one of the features of innovativeness (Lewicka, Misterek, 2013: 582). In a pool of different considerations, three aspects seem to be of particular interest. The first question to be raised is how to measure and express both the company's performance and CSR activities which then are to be compared? Finance and economic performance related to the companies' goals, as mentioned above, can be measured by effectiveness, efficiency, quality, timeliness, productivity and safety (*How to measure...*, 1995: 5). Laitinen has indicated that measurements could fall into internal and external factors. The internal factors include costs, production factors, efficiency of activities, product properties, revenue, competitiveness, and financial performance. The external factors cover cost allocation, production factors and properties of the product (Laitinen, Gin, 2006: 50–52). The approach from the different perspective suggests that CFP can be assessed through the market, accounting and survey measurement. The first refers to the satisfaction of the shareholders, the second is connected with the internal efficiency of the company, and the third one is based on a subjective estimation of finance performances (Orlitzky, Schmidt, Rhynes, 2003). Socio-economic effects of the company's activity seem to be far more difficult to identify. Whether CSR actions could be analysed separately, in detail or should be combined in cohesive groups is the subject of debate. On the one hand, in an extensive series of studies, researchers support the concept of combining various activities in heterogeneous programmes (Mattingly, Berman, 2006; Godfrey, Merrill, Hansen, 2009). For example, Pelozo has identified three cumulative groups of CSR actions that embrace a total of 39 detailed variables (Pelozo, 2009). The recommendations given by other authors are more supportive of the idea of analysing CSR actions separately. This approach allows us to avoid a pitfall of combining unrelated CSR activities and building up their one measure (Brammer, Millington, 2008; Godfrey, Merrill, Hansen, 2009). Inconsistent attitudes towards the way of how to measure performance and influences of CSR activities can bring about difficulties in the area of analysis presented by different authors.

Another aspect of this discussion is that the confirmation of mutual interrelations between CSR and companies' performance is dependent on various factors that are able to moderate these relations under different circumstances. One of such factors, for instance, is the financial situation of the company (Campbell, 2007). Based on studies presented by other researchers, the relationship mentioned above is moderated by the size of the company, its engagement in research and development, advertising (Brammer, Millington, 2008), perceived consumer value, brand equity, nationality (Staudt et al., 2014), historical circumstances (Barnett, 2007),

and incisiveness of the management (Hong, Li, Minor, 2016). Furthermore, in the global economy, the relationship between CSR and performance could be moderated by traits of local people (Banerjee, 2000), environmental characteristics (Jermier et al., 2006) and differences in working conditions (Radin, Calkins, 2006). All this points to some risk that a similar analysis conducted under various circumstances can yield contrary or inconsistent conclusions.

The third debatable issue is related to concepts of the analysis regarding the interrelation between CSR and the company's achievements. Within the typical approach, there can be distinguished the after profit obligation and before profit obligation models of CSR (Grzegorzewska-Ramocka, 2009). The first one is based on the primacy of profits. It means that the engagement of the company in CSR is possible when the company achieves the level of "economic accountability". Hence, the order of purposes is unquestionable. The primary concern of the company is focused on economic resources. Once market economic safety is achieved, a business entity has an open field to engage in pro-social activities (addressed to broad groups of stakeholders). Within the opposite approach, the company is deemed to be a part of the environment. Therefore, the company is obliged to manage in accordance with different rules related not only to economic issues but also to social expectations. Guided by this concept, the allocation of the company's resources should be performed in such a way so as not to break society's rules. It can be concluded that according to the first concept CSR activities are dependent on finance and economic accomplishments. The other suggests a rather reciprocal relationship or circular interferences that, in fact, make it impossible to identify which of them is a cause and which is an effect. The last conclusion proves to be concurrent with the suggestions presented by Bonaventura, da Silva, Bandeira-de-Mello who have pointed out at the idea of 'virtuous circle'. This concept assumes that companies which enjoy good financial performance invest in social responsibility and, due to this, they obtain a greater return. This, in turn, allows them to reinvest in social responsibility, and so forth (Bonaventura, da Silva, Bandeira-de-Mello, 2012).

The above-presented considerations seem to suggest that the investigation processes whose purpose is to identify the direction of inter-correlations among CSR and companies' performance can be conducted in a number of ways. Additionally, there is a lack of commonly accepted quantitative measurers and methods that could be adopted to various situations. Thus another question to be posed is which methods will be employed in these processes and what kind of variables should be used.

Hence, in accordance with this multifaceted context of measurement, Polish companies were examined to find out whether their financial performances and their commitment to CSR processes indicated significant ties. If so, what are their directions? Thus, this paper aims to complement, at least in part, the scope of relationships between the self-assessment of the company's performance and its engagement

in various CSR activities. It seems to be interesting to identify what kind of relationship and influences there are between the company's economic and non-economic activities and whether their value aspects, in their broad meaning, exist.

The proposal of how to resolve this issue is presented further on in the paper. The formulated hypothesis is consistent with the conclusions formulated by Bonaventura, da Silva and Bandeira-de-Mello (2012), i.e. that (H1) there are reciprocal interrelations between engagement in CSR activities and companies' performance that create a close multilevel chain of interferences.

In the literature, it is argued that in Polish medium-sized and large companies strong interrelations between CSR and the company's economic performance exist (Zajkowski, 2015: 125–127). In this study, with the usage of Spearman's correlation coefficients, it was possible to isolate 71 statistically confirmed relations. Still, another question arose, namely: which particular variable is independent and which one is dependent. The answer to this question is crucial to understand the mechanism of the interrelation between companies' achievements and socio-economical ideas. It is especially interesting to consider whether engagement in CSR can be boosting for the processes of additional value creation, whether it may increase the company's ability to gain profits, or whether it is likely to influence the company in any other way. The questions raised above were a springboard to make an attempt to identify what direction of influence among given variables is.

3. Methodology

The above-presented hypothesis was verified on the basis of primary data collected within the Polish National Science Centre Project No. 2012/07/B/HS4/00455 "Corporate governance, ownership structure and other financial issues of family enterprises in Poland and Austria – a comparative analysis". The process of original data collection was conducted with the use of CATI (Computer Assisted Telephone Interview) method. The survey agency made in total 12 155 phone calls to potential respondents who represented owners, CEOs and CFOs. As it turned out, 5504 business entities disagreed to participate in the survey and 4235 resigned during the investigation. Finally, there were 785 questionnaires fully filled in. Hence the value of the total initial response rate for the collection process of purposive sample achieved only 6.2% (Lederer, 2008; DiSogra, Callegaro, 2009: 1008–1032; Hoogendoorn, Daalmans, 2009: 69–71).

Given the main aim of the study, out of this group only family businesses were extracted. All entities recognised as family businesses were those for which the Substantial Family Influence (SFI) coefficient exceeded value one. With the methodology proposed by Klein (Klein, 2000), this value allows us to classify quite strictly an entrepreneur as a family firm.

Descriptive analysis of the tested sample allows for identifying the following characteristics. Most enterprises took the form of a LTD company (61.3%), and less often, they were general partnerships or limited partnerships (24.7%), joint-stock companies (5.6%) or sole proprietorships (8.4%). The remaining forms were sporadic. Only three companies were listed on the stock exchange. Enterprises came from various industries. Industrial processing dominated (57.1%), followed by construction (13.8%), trade (6.2%), accommodation and catering (2.6%), financial and insurance activities (2.6%) and health care (1.9%). The majority of the surveyed enterprises (93%) employed from 50 to 249 employees. The rest employed more than 249 people. The average employment was 114 employees. However, the diversification of enterprises in terms of revenues was as follows: 7.8% had annual revenues of up to PLN 5 million, 67.4% in the range of PLN 5–50 million, 21.0% in the range of PLN 50–200 million, and 3.8% over PLN 200 million. Based on the classification adopted by the European Union (Commission Recommendation 2003/361/EC..., 2003), medium-sized enterprises were dominant in terms of employment, but small enterprises were the majority in terms of revenues.

The description and analysis of the collected statistical material were carried out based on correlations (Appendix 1) and linear regression models.

4. Problem solution

4.1. Variables

In particular, CSR activities were attributed by the following variables: safety of employees, social care of employees, regional activity (e.g.: charity), charity at the international level, the control of the ethical behaviour of employees, general activities for the environmental protection, environmental certification, consumer and client protection, protection of minor shareholders/owners, and taking precautions against corruption. On the other hand, the economic and finance performances of the companies were expressed by: liquidity, profitability, an extent of innovations, a growth outlook, risk of activity and a scale of investment activity. The particular variables were measured on ordinal scales. In respect to CSR activities, 1 on the scale means ‘yes, we as a company are dealing with a given aspect of CSR but it has very little importance for us’ and 5 shows the opposite value denoting: ‘yes, we as a company are dealing with a given aspect of CSR and it has great importance for us’. The economic performance of the companies was assessed not by hard data, such as profits, ratios and other measures, but by the self-assessment of the companies related to the average situation in a given industry or sector. In this case, 1 means, for instance: ‘our liquidity is significantly below the average level of the industry’ to 5: ‘our liquidity is significantly above the av-

erage level of the industry'. This approach goes in line with the concept of Orlitzky, Schmidt, Rhynes presented above where there was a suggestion of measuring finance performance by subjective estimation (Orlitzky, Schmidt, Rhynes, 2003).

Additionally, we supplemented our models with five following controls: age of the company – CT_1 ; employment (log) – CT_2 ; importance of economic goals (adopted the Likert scale 1–5) – CT_3 ; importance of non-economic goals (adopted the Likert scale 1–5) – CT_4 and internationalisation (0– non-internationalised; 1 – internationalised) – CT_5 . It should be pointed out that the legitimacy of adoption of the linear regression model was confirmed in a broad list of other studies (Baron, Franklin, Hmieleski, 2016; Chuang, Jackson, Jiang, 2016; Wallace et al., 2016).

4.2. Models

The process of identifying the direction of influence was conducted in two ways. First, it was assumed that CSR activities were independent (causes) and the self-assessment of the companies' performance was dependent (effects). For each dependent variable (enumerating the company's achievements), the linear equation was formulated as follows:

$$P_i = a_{i0} + \sum_{k=1}^5 a_{ik} CT_{ik} + \sum_{n=1}^{10} a_{in} C_{in} + \varepsilon_i, \tag{1}$$

where:

P_i – the self-assessment of the company's achievements in one area compared to the industry or sector,

a_{i0} – constant,

CT_{ik} – control variables,

C_{in} – the appraisals of various CSR activities,

a_{ik} – parameters by control variables,

a_{in} – parameters by CSR variables,

ε_i – residual value

i – the number of dependent variables.

Afterwards, in a further analysis, the presumed direction of interrelations between the variables was reversed. The formal shape of equation in this case can be written as follows:

$$C_j = b_{j0} + \sum_{k=1}^5 b_{jk} CT_{jk} + \sum_{m=1}^6 b_{jm} P_{jm} + \varepsilon_j, \tag{2}$$

where:

C_j – given appraisals of various CSR activities,

b_{j0} – constant,

CT_{jk} – control variables,

P_{jm} – the self-assessment of the company's achievements in one area compared to the industry or sector,

b_{ik} – parameters by control variables,

b_{jm} – parameters by self-assessment variables,

ε_j – residual value,

j – the number of dependent variables.

Subsequently, the parameters of all linear regression models were calculated and evaluated with the support of IBM SPSS Statistics. The results obtained are presented in Table 1. It is worth noting that the constants were excluded from further analysis as factors that did not play a crucial role from the perspective of the considerations included in this paper.

The factors describing the company's achievements were taken as independent and CSR activities as dependent, and new linear models of regressions were calculated (see Table 2). The equations discussed above show that there are significant interrelations in both types of models, i.e. models where the role of independent variables are performed by the self-assessments of the companies' achievements in a particular area compared to the industry or sector and models where the same roles are played by different kinds of CSR activities. Obviously, not all the parameters are statistically significant but part of them indicate direct relationships. It is worth noting that the plus or minus signs before parameters describes the direction of impact which a single change of an independent variable has on the dependent ones.

The multicollinearity between explanatory variables was tested for all the models. VIF tests totalled from a little above 1 to little above 2. It means that the variables were not correlated or that the correlation was pretty small. Additionally, it is worth mentioning that the set of parameters that describe reliability of the models was presented in Appendix 2. Taking into consideration the summarising of the model, we excluded from the conducted analyses models with dependent variables P_5 and C_4 , as we were not able to predict the outcome variable.

Table 1. Linear regression models calculated for CSR as explanatory variables

Explained	Profitability (P ₁)	Liquidity (P ₂)	Degree of innovations (P ₃)	Outlook of growth (P ₄)	Risk of activity (P ₅)	Scale of investment activity (P ₆)
Constant	3.588***	2.680***	3.247***	3.594***	2.778***	4.489***
Age of the company	-0.002	-0.007	0.010*	0.001	0.006	-0.003
Employment (log)	-0.001*	-0.001	-0.001*	-0.001*	0.000	-0.001
Importance of economic goals (1-5)	-0.118	0.040	-0.064	-0.144*	0.014	-0.249**
Importance of non-economic goals (1-5)	-0.075	-0.023	-0.037	-0.078	-0.022	-0.071
Internationalisation (0-1)	0.136	0.019	-0.033	0.065	-0.017	0.114
Safety of employees (C ₁)	0.007	-0.007	0.009	-0.036	-0.008	-0.122***
Social care of employees (C ₂)	-0.007	-0.031	-0.034	-0.004	-0.002	0.045
Region of activity (e.g.: charity) (C ₃)	-0.001	0.003	-0.017	-0.034	0.007	-0.047
Charity at the international level (C ₄)	-0.117	-0.109	-0.001	-0.032	0.079	-0.087
The control of the ethical behaviour of employees (C ₅)	0.093*	0.083*	0.026	0.086*	0.013	-0.029
General activities for the environmental protection (C ₆)	-0.103**	-0.093*	-0.032	-0.033	-0.047	-0.037
Environmental certification (C ₇)	-0.030	0.037	-0.020	-0.026	0.064*	-0.014
Consumer and client protection (C ₈)	-0.107*	-0.112*	-0.038	-0.073*	-0.022	0.042
Protection of minor shareholders/owners (C ₉)	0.042	0.083	0.004	0.015	-0.090	0.049
Taking precautions against corruption (C ₁₀)	0.071*	0.033	-0.016	-0.015	0.005	-0.024

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Source: own study

Table 2. Linear regression models calculated for the company's performance as explanatory variables

Explained	Safety of employees (C ₁)	Social care of employees (C ₂)	Region activity (e.g.: charity) (C ₃)	Charity at the international level (C ₄)	The control of the ethical behaviour of employees (C ₅)
Constant	3.125***	1.832*	1.293*	1.193***	0.909
Age of the company	-0.015	0.001	0.004	0.000	-0.008
Employment (log)	0.002*	0.003***	0.002*	0.000	0.002*
Importance of economic goals (1-5)	0.289	0.254	0.124	0.077	0.098
Importance of non-economic goals (1-5)	0.006	-0.020	0.145	-0.030	0.111
Internationalisation (0-1)	0.308*	0.225	0.113	-0.117*	0.058
Profitability (P ₁)	0.041	0.056	-0.013	-0.037	0.096
Liquidity (P ₂)	-0.115	-0.112	-0.029	-0.013	0.093
Degree of innovations (P ₃)	0.138	-0.009	0.039	0.014	-0.025
Outlook of growth (P ₄)	-0.082	-0.095	-0.097	-0.016	0.049
Risk of activity (P ₅)	-0.083	-0.012	0.007	0.020	-0.087
Scale of investment activity (P ₆)	-0.556***	-0.175	-0.224*	-0.035	-0.189*

Explained	General activities for the environmental protection (C_e)	Environmental certification (C_7)	Consumer and client protection (C_8)	Protection of minor shareholders/ owners (C_9)	Taking precautions against corruption (C_{10})
Constant	3.287***	1.455*	2.247***	1.174*	1.828*
Age of the company	-0.006	-0.004	-0.012	-0.004	-0.014*
Employment (log)	0.002*	0.002**	0.001	0.002**	0.002*
Importance of economic goals (1-5)	0.071	-0.049	-0.045	-0.019	-0.110
Importance of non-economic goals (1-5)	0.055	0.118	0.119	0.078	0.244*
Internationalisation (0-1)	0.164	0.295*	0.201	0.206	0.166
Profitability (P_1)	-0.178	-0.161	-0.051	0.040	0.219*
Liquidity (P_2)	-0.077	0.100	-0.043	0.057	0.035
Degree of innovations (P_3)	0.033	-0.041	-0.026	-0.046	-0.046
Outlook of growth (P_4)	-0.026	-0.067	-0.202*	-0.064	-0.179
Risk of activity (P_5)	-0.110	0.046	-0.065	-0.109*	-0.090
Scale of investment activity (P_6)	-0.281*	-0.091	-0.004	-0.017	-0.222*

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Source: own study

5. Discussion

In the next step of the study, significant relationships in the above-presented tables were extracted. The picture obtained afterwards seems to be relatively clear and comprehensible (see Figure 1). The arrows show the direction of dependence coming from the independent or dependent variable and the numbers in parentheses describe the specification and the power of influence (whether the causality is positive or negative). According to the results obtained, there are three combinations of variables where both models constructed with CSR as dependent and the companies' achievements as dependent connections are statistically significant. It encompasses the following combinations: $C_1: P_6$, $C_8: P_4$, $C_{10}: P_1$. These relationships seem to suggest circular ties between some aspects of CSR engagement and the self-assessment of the company's achievements. In particular, higher engagement in taking care of safety of employees (C_1) is correlated negatively with the perception of an investment activities scale (P_6) and this connection is reciprocal. It means that stronger engagement in investment processes mitigates the importance of employee safety. Additionally, the coefficients in both models show that the perception of investment activities affects to a greater extent employees (-0.556) care than the inverse relationship (-0.122). A similar negative circular interrelation occurs among consumer and client protection (C_8) and an outlook of growth (P_4). In this case, also the perception of "economic aspects" has a stronger impact on CSR engagement (-0.202) than the inverse relationship (-0.073). By contrast, mutual relationships between the variable: taking precautions against corruption (C_{10}) and the perception of profitability (P_1) seem to be boosters and also the economic dimension influences CSR activity more crucially (0.219 to 0.071). It goes in line with results of other studies which confirm that enterprises which operate in less corrupted circumstances are more profitable than those that act in a corrupted milieu (Robertson, Watson, 2004).

Taking into account the remaining significant interrelations, one may try to formulate several conclusions. Firstly, it is evident that with the increase in the self-assessment of the scale of investment activity (P_6), which is a cause, CSR engagement in: safety of employees (C_1); regional activity (C_3), the control of ethical behaviour of employees (C_5), general activities in the environmental protection (C_6), and taking precautions against corruption (C_{10}) simply falls. The study provides noticeable evidence that the growing investment needs and pro-development expenses do not foster the realisation of socio-economic concepts. The models prove that companies may choose the way in which the expenditure is to be incurred.

Other interrelations show that a higher perception of the company's risk exposure (P_5) influences negatively processes directed towards the protection of minor shareholders or owners (C_9). It seems to be natural that in a more risky situa-

tion which endangers economic and non-economic achievements of the company as a whole it is more important to tackle the risk than put efforts into and waste energy on maintaining owner minorities' satisfaction.

The control of the ethical behaviour of employees (C_3), which performs the explanatory role in one group of regression models, seems to be able to have a positive impact on profitability (P_1), liquidity (P_2) and an outlook of the company's growth (P_4). The models provide clear evidence that companies which pull their weight and care about ethical behaviour of their workers, simultaneously assess their performance and long-term perspectives better than the other ones.

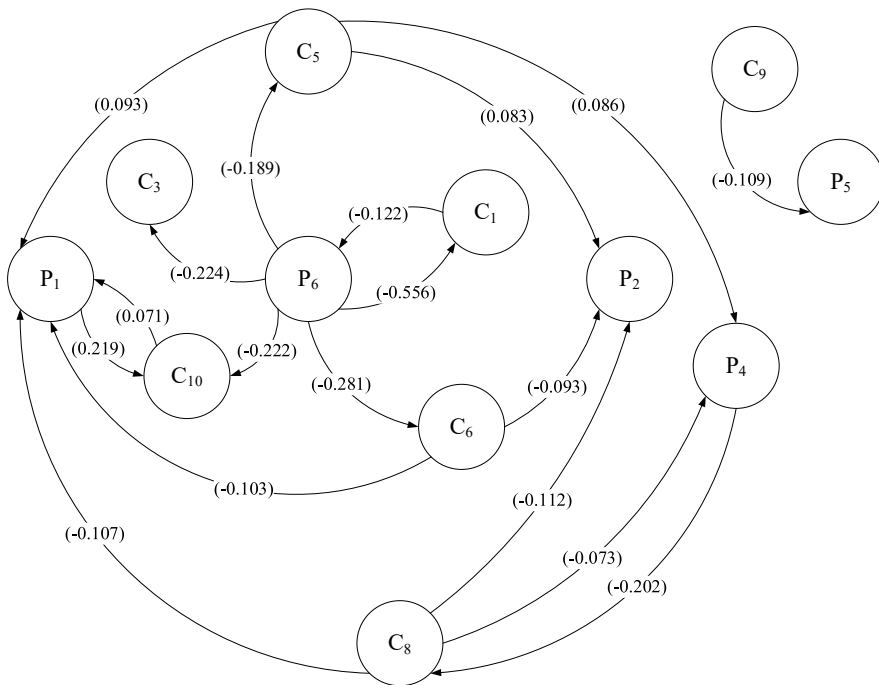


Figure 1. The significant parameters of the linear regression models and the direction of influence (see the direction of the arrows), identified on Tables 1 and 2

Source: own study

The study shows that the engagement of companies in general activities for the environmental protection (C_6) affects negatively their profitability (P_1) and liquidity (P_2). On the one hand, it is proven that the company's image goes in line with its stronger engagement in environmental protection and that it should be translated into higher supply of goods and services, which may be connected with acceptance of higher contributions (gross profit margin). On the other hand, the calculated models contradict such an interrelation and show some divergences among

expenses on environmental protection and companies' ability to raise profits and optimise liquidity. The conclusion can be drawn that additional expenses on environmental protection are not translated into higher sales revenue. Additionally, consumer and client protection (C_8) as an independent variable likewise affects profitability (P_1), liquidity (P_2) and a growth outlook (P_6) negatively. In this case, a similar conclusion can be reached. Consumer and client protection is connected with expenses and such expenditures do not increase companies' achievements. Obviously, care about clients and consumers could create a positive image of companies but in the Polish market practice such a good perception is not yet a source of economic success.

6. Conclusions

The evidence presented above may lead to conclusions that support the hypothesis (H1). In the group of medium-sized and large Polish companies, the mutual relationship and ties create a close multilevel chain of interferences. The scale of investment activity has a negative effect on various CSR activities. Some CSR actions affect positively profitability and liquidity, while others have a negative effect. The picture which emerges from our study seems to present an unclear set of mutual interrelations between CSR activities and the self-assessment of companies' performance. It rather defies studies that present results which depict positive relationships between these areas (Longo, Mura, Bonoli, 2005; Salzmann, Ionescu-Somers, Steger, 2005) and does not confirm the suggestion made by Moneva, Rivera-Lirio and Muñoz-Torres (2007) that good social performance is compatible with good financial performance. Moreover, in some cases, there are simultaneous significant interrelations (the particular variable plays a twofold role – at the same time it is both dependent and independent). These findings could play a role of a springboard for further studies and may open a new scope of research. Two potential areas could be recommended. The first one would be related to the 'recovery points' (dead-centres) of companies' behaviour and actions. In other words, what is the ultimate saturation of performance or CSR activities at which the company would be prone to become involved in other kinds of activities. For instance, it comes down to an answer to the question which level (ratios, expenditures) of investments needs to be achieved for the company to change its attitude towards CSR activities or what stage of pro-CSR expenditures is perceived as the ultimate and possibly inhibiting further engagement in such activities. Another question is the direction of this engagement, e.g.: whether, after the recovery point the said engagement rises or falls. Such findings may provide some new information explaining the mechanism of the relationship between CSR and the company's performance.

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Appendix 1. Matrix of correlations between the analysed variables

Variables	Age of the company	Employment (log)	Importance of economic goals (1-5)	Importance of non-economic goals (1-5)	Internationalisation (0-1)	P ₁	P ₂	P ₃	P ₄	P ₅	P ₆	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C ₉	C ₁₀	
Age of the company	1																					
Employment (log)	-0.005	1																				
Importance of economic goals (1-5)	0.007	.101*	1																			
Importance of non-economic goals (1-5)	0.032	-0.024	.386**	1																		
Internationalisation (0-1)	-0.004	0.054	0.089	0.044	1																	
P ₁	-0.004	-.123*	-.119*	-0.089	0.066	1																
P ₂	-0.051	-0.063	-0.004	-0.019	0.012	.562**	1															
P ₃	.113*	-.155**	-0.074	-0.051	-0.041	.317**	.317**	1														
P ₄	0.030	-.156**	-.159**	-.122*	0.002	.454**	.386**	.526**	1													
P ₅	0.042	0.022	-0.001	-0.029	-0.030	.109*	0.063	.175**	.157**	1												
P ₆	-0.016	-.129*	-.227**	-.146**	0.030	.331**	.294**	.450**	.407**	.118*	1											
C ₁	-0.033	.167**	.146**	0.087	0.084	-.101*	-.110*	-.122*	-.205**	-0.056	-.289**	1										

C ₂	0.024	.194**	.117*	0.057	0.084	-0.085	-.110*	-.133**	-.150**	-0.034	-.164**	.623**	1								
C ₃	0.033	.147**	.118*	.135**	0.070	-.109*	-.084	-.118*	-.177**	-0.022	-.203**	.421**	.455**	1							
C ₄	-0.005	0.012	0.080	0.001	-.126*	-.098*	-.072	-0.034	-0.080	0.023	-0.097	.120*	.155**	.155**	1						
C ₅	-0.054	.134**	0.083	0.048	0.034	0.011	0.032	-0.073	-0.040	-0.035	-.138**	.311**	.239**	.296**	0.039	1					
C ₆	0.002	.115*	0.092	0.063	0.034	-2.12**	-.158**	-.140**	-.198**	-0.058	-.227**	.523**	.376**	.410**	.138**	.350**	1				
C ₇	-0.017	.146**	0.066	0.057	0.094	-.165**	-.053	-.127*	-.168**	0.017	-.131*	.269**	.200**	.310**	.123*	.311**	.566**	1			
C ₈	-0.071	.110*	0.063	0.061	0.050	-.123*	-.102*	-.120*	-.173**	-0.076	-0.084	.378**	.225**	.304**	.137**	.452**	.365**	.360**	1		
C ₉	-0.045	.177**	0.031	0.028	0.086	-0.029	0.021	-0.094	-.112*	-0.097	-0.064	.310**	.200**	.238**	.171**	.417**	.302**	.394**	.558**	1	
C ₁₀	-0.077	.185**	0.060	0.064	0.053	0.010	-0.009	-.119*	-.136**	-0.054	-.144**	.404**	.280**	.268**	.167**	.429**	.349**	.279**	.504**	.523**	1

** p ≤ 0.01 (two-tailed), * p ≤ 0.05 (two-tailed).

Source: own study

Appendix 2. Reliability of the models

Dependent variable	R	R Square	Adjusted R Square	R Square Change	F Change	Sig. F Change
P ₁	0.329	0.108	0.073	0.108	3.108	0.000
P ₂	0.258	0.066	0.030	0.066	1.809	0.032
P ₃	0.256	0.066	0.029	0.065	1.731	0.043
P ₄	0.333	0.111	0.076	0.111	3.177	0.000
P ₅ (excluded)	0.169	0.028	-0.010	0.028	0.741	0.742
P ₆	0.393	0.155	0.120	0.155	4.444	0.000
C ₁	0.374	0.140	0.113	0.140	5.263	0.000
C ₂	0.279	0.078	0.049	0.078	2.742	0.002
C ₃	0.284	0.081	0.053	0.081	2.854	0.001
C ₄ (excluded)	0.207	0.043	0.013	0.043	1.456	0.146
C ₅	0.250	0.062	0.033	0.062	2.159	0.016
C ₆	0.287	0.082	0.054	0.082	2.915	0.001
C ₇	0.256	0.065	0.037	0.065	2.270	0.011
C ₈	0.238	0.057	0.028	0.057	1.956	0.032
C ₉	0.250	0.062	0.033	0.062	2.157	0.016
C ₁₀	0.299	0.089	0.061	0.089	3.190	0.000

Source: own study

Kierunki współzależności między wynikami przedsiębiorstw a zaangażowaniem w działania z zakresu społecznej odpowiedzialności biznesu (CSR)

Streszczenie: Współzależności między zaangażowaniem przedsiębiorstw w różnorodną działalność związaną ze społeczną odpowiedzialnością biznesu (*Corporate Social Responsibility* – CSR) a ich wynikami są jednymi z ważniejszych kwestii badawczych i praktycznych. Liczne wyniki badań w tym obszarze wydają się prowadzić do rozbieżnych konkluzji, wskazując zarówno na istnienie korelacji dodatnich, jak i ujemnych. W artykule podjęto próbę uzupełnienia luki badawczej o wyniki badań przeprowadzonych na grupie polskich średnich i dużych przedsiębiorstw. W tym celu wykorzystane zostały adekwatne modele regresji liniowej, w których z jednej strony rolę zmiennych objaśnianych pełniły aktywności ukierunkowane na CSR, z drugiej natomiast prezentujące samoocenę efektów ekonomicznych przedsiębiorstw. Sformułowane wnioski pozwoliły potwierdzić, że związki te, jeżeli występują, mają raczej charakter cyrkularny (tzw. wielowymiarowy łańcuch powiązań) niż przyczynowo-skutkowy.

Słowa kluczowe: przedsiębiorstwa rodzinne, CSR, wyniki finansowe przedsiębiorstw, społeczne zaangażowanie przedsiębiorstw

JEL: C21, L25, M14

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