ABSTRACT. Our paper performs a comparative analysis of the development level of Corporate Social Responsibility (CSR) concept in Romania and Poland. The descriptive part of our study focuses on literature review in order to present the latest trends regarding CSR programs and practices implemented by both large and small companies originating from these two countries. Having in mind the idea that universities are assigned with the vital role in educating and disseminating socially responsible behaviour on both individuals and enterprises, we shifted our area of investigation on the issue of CSR education within Romanian and Polish context. As we noticed lack of research on the effectiveness of CSR courses in Romania as well as in Poland, we designed an empirical study which aims to shed light on the main factors that determine the level of CSR awareness among Bachelor graduates from a Romanian university.

Introduction

Throughout the past few decades, a great deal of attention has been placed in literature on the concept of Corporate Social Responsibility (CSR), which became the battlefield of theory-building, debates, analysis, critique and further research. Granting all theoretical considerations and reflections on the core meaning of the concept and the multifaceted aspects attached to it, CSR has rapidly spread and developed within both academic and practical fields worldwide.

Although CSR follows different growing patterns and trends within the international business environment, there are a few recent studies highlighting its constant development experienced by Central and Eastern European countries (Mulerat, 2013; Hys & Hawrysz, 2013; Paliwoda-Matiolańska, 2014; Iamandi, 2012; Filip et al., 2012; Bakanauskiene et al., 2016; Cioca and Moraru, 2010; Dobre-Baron and Nîțescu, 2016; Obrad, 2011; www.csrforall.eu). In Romania and Poland, for instance, the CSR concept emerged relatively recently, but its amazing growth became a real phenomenon, which was fuelled both by the integration of these two countries into the EU and by the entrance of multinational companies.
and foreign investors to these domestic markets (Dura & Drigă, 2016; Ogrean, 2014; Mullerat, 2013; Dura and Dobre-Baron, 2015; Kunz et al., 2015). Subsequently, a lot of concerns regarding the assimilation of CSR concept within higher education institutes began to take roots. Since a commonly accepted approach of curriculum/content of CSR education has not yet been shaped, we consider that comparative exploration of different views on this subject in Romania and Poland represents a highly relevant issue, with potential interesting conclusions regarding CSR perception by younger generations.

Today, one cannot pick up a journal, a magazine or even a newspaper without coming upon some debates or arguments on the CSR topic, some new best practices case studies or some scientific meetings to be held. In other words, there are many traditional and newer ways of getting a line on CSR phenomena through books, academic journals, treatises, encyclopaedias, websites, forums, newsletters, blogs and other media that address this issue on the regular basis (Carol & Shabana, 2010; Kot, 2014; Paulík et al., 2015; Man and Măcriș, 2015).

Under the circumstances, it is obvious that a great number of scholars from Poland and Romania have been exposed, to some extent, to the CSR concept, regardless their age, level of study or field of interest. Our paper aims at deepening comprehension on the phenomenon and it calls into requisition both qualitative and quantitative approach. First, we have collected quantitative secondary data from diverse sources that are open access for the public through the Internet: academic articles and research papers, national and international reports, websites and CSR studies conducted by well-known consultancy firms, blogs, online platforms for CSR programs and other media sources. Credibility of the analyses and facts that are pointed out within the paper are strengthened through examination of this phenomenon by using varied sources of information. Still, every conclusion may involve the subjectivity of authors as a matter of course.

Secondly, we have conducted an empirical research employing ANOVA method (with the Latin Square Design for our statistical experiment) in order to assess the main determinants of CSR courses efficiency within a Romanian university. If we take into consideration that the area of our empirical research is localized within a sample of students selected from a small university, we have to admit that the main limitation of our study resides in the fact that our results cannot be subject to generalization at the regional and/or national level.

The paper is organized as follows. The next section provides insights on the issue of CSR development in Romania and Poland as a prerequisite for understanding education approaches in the area. Section 3 looks at different experiences and perspectives on social responsibility education among universities of the two countries compared. Section 4 provides the results of an empirical study carried out among Bachelor students at the University of Petroșani, in order to grasp their level of awareness regarding CSR concept. Finally, sections 4 is dedicated to conclusions and future research directions.

1. Literature review

In Romania, the CSR concept emerged in the 1990s, when several international institutions have joined their efforts in supporting the process of lying-in new NGOs, which were mainly focused on humanitarian purposes. The tendency was accompanied, during the 2000s, by other major developments which occurred in the Romanian business environment in order to lay the groundwork for the EU integration. Such developments refer most often to the process of replacing old technologies with environmentally friendly alternatives, as well as to implementing employee health policies and society-oriented projects. Responsible corporate practices were judged, in the early stages of CSR adoption, as rather focused on PR and corporate image than on
real commitments to sustainable business actions. Recent years have witnessed the emergence of responsible practices in the area, a positive tendency which tends to take shape, as a result of the authentic implication of transnational corporations that disseminated valuable managerial practices from their origin countries, and of legislation improvements and opportunities of getting access to EU funds (CSR for ALL, 2013; Wolska, 2015).

According to the results of the study CSR Trends and Realities in Romania issued in 2015 by CSRmedia.ro and EY Romania, CSR represents a topic of interest to executives of Romanian companies, while buyers and investors begin to look more often at their commitment to the environment and to the society. In 2015, 63% of companies involved in CSR will assign between 5,000 and 500,000 EUR for social responsibility and sustainability projects. Thus, 14% will spend between 5,000 and 10,000 EUR, 27% will spend between 10,000 and 50,000 EUR, while 21% will spend between 50,000 and 500,000 EUR (CSRmedia.ro & EY Romania, 2015).

When it comes to CSR reporting practices, 37% of the responsible companies use their own reporting systems, while only 13% apply international reporting standards and 7% invoke assessments performed by their business partners (especially NGOs). However, a significant percent of the Romanian responsible companies – 40%, simply do not keep trace of the impact of their CSR strategy upon the community. Figure below enables comparison of Romanian companies and other organizations from Central Eastern European (CEE) countries, from the point of view of the number of GRI reports issued till 2016.

![Number of GRI reports by CEE countries till 2016](image_url)

Figure 1. Number of GRI reports by CEE countries till 2016


*Figure 1* confirms the above mentioned results of CSR Trends and Realities in Romania, in terms of low concern towards sustainability reporting. Romania occupies the eighth position in the ranking, with only 32 reports issued by large companies that follow GRI international standards. We must also emphasize that Poland holds the second position in the same ranking, having 163 sustainability reports which are being prepared in compliance with GRI requirements.
CSR projects address most frequently in the Romanian case to domains like education, social issues, children support, health, environment, arts, religion and sports. Nevertheless, the area of CSR programs is not restricted to community involvement, but it also covers supply chain responsibility, clients’ satisfaction, as well as employee well-being. Thus, 55% of the Romanian responsible companies will develop a sustainable supply chain strategy, as a significant component of their view on the CSR issue (CSRmedia.ro & EY Romania, 2015).

While transnational corporations and other large economic entities have progressively configured a culture of responsible behaviour, one can still identify numerous organizations within the Romanian business environment which still mistake CSR strategy for philanthropic approaches and strictly converge their efforts on donations, sponsorships and public relations. The literature indicates corporate codes of conduct, social investments, direct philanthropy, development of in-house projects, public purpose partnerships and volunteering actions involving employees, between the prevailing CSR instruments applied by the Romanian companies (Băleanu et al., 2011; CSR for ALL, 2013).

In the same train of thought, the CSR concept is yet to be known and/or partially understood within Romanian SMEs’ sector. However, taking into consideration the complexity of business connections between big companies and SMEs under the influences of globalization, it is obvious that transnational corporations tend to expand their sphere of influence upon their partners’ operations. In other words, CSR strategies and practices implemented by large organizations in Romania and elsewhere are likely to generate positive effects on the level of SMEs’ social responsible behaviour (Anca et al., 2011). In fact, the Romanian literature put forward, during recent years, many cases of best practices and knowledge transfer that equally involves large economic entities and SMEs. It is worth mentioning in this context the case of responsible companies which appeared after Romania’s integration in the EU and supported, naturally, the consolidation of “responsible industries” at the national level. Such companies are making a business case of operations that enhance community’s welfare and/or assure environmental sustainability, as their involvement in CSR issues derives directly from the products and services they provide. Between the most significant cases of responsible business in Romania, we can refer to manufacturers and retailers of ecological and organic products, entrepreneurs from rural and eco-tourism area and producers in waste management and renewable energy fields (CSR for ALL, 2013; Anca et al., 2011).

When analysing the issue of CSR development in Poland, we must stress that the country represents, likewise Romania, a new market economy having been grown only after 1989. In this respect, it is obvious that the old Polish cultural model, crystallized under the influence of the communist administration, had a strong effect on the public understanding regarding the widening of the private sector and the emergence of business entrepreneurs. This is why CSR was initially judged as being an obstacle for the growing perspectives and further development of the market system (Olejniczak, 2014). From this point forward, we can identify the following characteristic stages that accompanied the process of gradual adoption of CSR in the context Polish business environment (Olejniczak, 2014; Hys & Hawrysz, 2013; United Nations Development Programme, 2007):

- **The embryonic development** (1997-2000), defined as the „stage of silence”, when Polish enterprises showed an absolute lack of interest regarding CSR issue and any other related activity in the field;

- **The „awakening phase”** (2000-2002), when the concept of CSR generated scepticism and even hostility among the majority of business leaders and economic analysts. Thus, authorities and executives of Polish companies believed that the consolidation of the self-regulating market would be the universal remedy for any economic difficulty;
The stage of interest (2002-2004), during which the role played by the ethical behaviour and CSR approach in the process of rooting moral business practices within the Polish context was finally recognized;

The stage of activity (2004-2006), when practical initiatives and projects in the field of CSR gave rise to the first synergic positive results;

The phase of advanced approaches in the CSR field (2006 – up until now), when the institutional framework for CSR was stabilized and the concept was linked or integrated with other economic strategies, completed at regional and/or national level.

Nowadays, Polish managers of large and medium companies are catching up with the most common western tendencies in the CSR area, while SMEs originating from the same country seem to not fully acknowledge the significance of the concept for the benefit of their business. In other words, CSR approach by Romanian and Polish SMEs is very much alike. A quantitative survey concerning CSR integration, conducted within Polish companies in 2011 (Wolska & Kizielewicz, 2015), revealed that SMEs included in the sample aimed specifically at short-term market objectives without being concerned about developing a long-run perspective on the issue.

Large Polish companies, which are highly involved in performing advanced CSR strategies, represent the other side of the coin. According to the analysis performed through the instrumentality of panel data collected from enterprises that make the list of 500 biggest companies in Poland, we can mention a lot of examples of executives that have drawn integrated CSR and sustainable development strategies for their business (Paliwoda-Matiolańska, 2014). Results obtained by Wolska & Kizielewicz which examined approximately the same segment of enterprises included in the top 500 of “Polityka” and top 500 of “Rzeczpospolita” newspapers, are very much in line with the above mentioned forward-looking approach on CSR. Thus, 67 percent of 230 companies engaged in their survey, lie ethics and CSR principles on the basis of the modern management of their operations. 88 percent of the cases would consider CSR as a part of another strategic document such as HR or sustainability strategy, 46 percent would integrate CSR within the overall business strategy while 39 percent would elaborate a separate CSR strategy. An in-depth qualitative analysis on the nature of CSR activities performed in Polish companies brought into focus the following areas of interest: building responsible relationships with business partners; improving employees and working condition; fostering responsible relations with consumers and community; occupational health & safety; environmental management; promoting economic and social development; setting standards and education in the field of responsible business (Paliwoda-Matiolańska, 2014).

Figure 2 displays statistics of good practices within Polish business environment, starting from data published by Responsible Business Forum (RBF) since 2002. An outstanding growth in the number of good practices applied by large and medium Polish enterprises can be emphasized. For instance, in 2015, 454 good practices were identified among 141 companies. This figure shows a 73% increase in good practices in 2015, compared to 2012 level.
We must also mention the relevant findings of a recent study conducted by RBF from Poland, in cooperation with PBS and Deloitte on the issue of investigating managers’ perspectives on CSR. More than 80% out of 133 answerers appreciate the effects of CSR practices upon their business (RBF, 2015). The shift is more often recognized in the way the company operates (mentioned by over 60% of respondents) and also, in the level of concern that it shows in relation with social and environmental issues. However, the main drawback to CSR development within Polish organizations was considered the insufficient understanding of the CSR concept among top-level managers.

Between the more efficient tools used by Polish CSR managers in their current activity, the following are mentioned: stakeholder dialogue (46%); corporate volunteering (35%); management systems such as ISO or SA 8000 (11%); charitable and philanthropic activity (13%) etc. Hence, the major challenges for years to come would encompass not only to increase the level of CSR awareness in the group of top-level managers, but also to draw their interest on the issue of measuring the effectiveness of CSR activities (RBF, 2015).

It is worth-mentioning that Deloitte also performed a very similar study – “CSR Managers Survey 2015 in Central Europe”. The same methodology was used in order analyse managers’ views on CSR in 10 countries: Bulgaria, the Czech Republic, Hungary, Kosovo, Latvia, Lithuania, Romania, Serbia, Slovakia and Slovenia. The results highlighted by the regional study are generally in line with the conclusions drawn by the Polish study. They also give testimony of the higher level of CSR development in Poland than in the other CEE countries. The conclusion is supported mainly by the following reasoning: the wider range of CSR activities employed by Polish managers in their work; the greater importance given to the process of building trustworthy relations with customers, employees and other stakeholders; the ability to use more professional tools in order to determine the efficiency of their CSR activities.

Nevertheless, researchers that performed these studies have also mentioned some limitations that have to be taken into account while drawing „the big picture” of Polish responsible companies. Thus, considering that CSR became a standard approach within the majority of Polish enterprises would be a rather utopic view on the phenomenon. It is
estimated that only about 100 largest companies that operate in Poland have developed a management structures dedicated to CSR activities, have fully implemented corporate conduct codes and have 100% met the requirements of international standards in the area of CSR reporting (Polityka, 2012). Like in the Romanian case, we consider that this strong nucleus of medium and large companies will be in the public eye for years to come and will play the leading role in the process of disseminating knowledge and relevant best practices in the CSR field.

2. Perspectives on social responsibility education

2.1. The Romanian Case

In connection with the increasing interest on CSR in the literature, it is widely accepted that the education system plays a vital role within the process of developing social responsibility values among people working in various fields. The dramatic transformations that took place over the past decades in the European countries at the economic, political and social levels have inevitably affected higher education institutions, which were compelled to meet unfamiliar challenges and draw new competitive advantages. Between the main forces that reshape the universities’ mission, their organisational structures and their mode of operation, we can mention the globalisation phenomenon, the emergence of knowledge society and the adoption of market orientation in the field (Vasilescu et al., 2010). Furthermore, Romanian universities had to cope with another critical issue – chronic underfinancing in education (6% of GDP) – which enhanced the managerial structures’ struggle for private funding resources (Stanciu, 2014). In this context, emphasis on CSR education comes into view both as a need and as a tool, via which academic institutions could establish productive networks with business entities and could contribute, at the same time, to the process of creating the background knowledge and skills for the sustainable development of the nation. Analysing the state of the art in the field of CSR education calls into requisition three different and yet complementary facets of the same issue: a) the adoption of CSR – related topics in the curricula and the creation of new study programs in business and technical fields; b) the involvement of the universities in research projects, workshops, conferences, inter-university cooperation programs etc. aiming at disseminating valuable information on the topic; c) the propensity of the academic management towards developing and communicating CSR programs and activities.

The subject of social responsibility within Romanian universities is under-researched. Only few papers addressed the issue in recent years (Anca et al., 2011; Burcea & Marinescu, 2011; Dima et al., 2013; Dumitrașcu et al., 2014) and their conclusions seem to acknowledge the idea that academic institutions have not fully assumed their role in the development and support of CSR concept and practices in Romania. The most plausible motivation behind the phenomenon consists in the fact that the Romanian higher education system is still lethargic and inflexible, imposing a lot of restrictions to initiatives aiming at curricula modification (Dima et al., 2013). Unfortunately, the topics of CSR and sustainable development does not constitute as yet the content of standalone study programs within Romanian academic environment. However, distinguishing components of the topics (such as business ethics, quality management, occupational safety and health etc.) represent key ingredients of the curricula for many Bachelor and Master programs, founded most often in the field of Business, Social Sciences and Engineering (Anca et al., 2011).

The fact that Romanian universities have not yet configured a coherent educational offer in the CSR domain remains a major drawback of the higher education system that generates a poor CSR culture among the graduates and a low capacity of exploiting the
benefits generated by a responsible business behaviour both for the economic entities and the entire society.

CSR – related research projects conducted by Romanian scholars share the same incomplete approach, focusing on one or two of the components of CSR/sustainable development topics (i.e. environmental research, employee relations research, equality and non-discrimination research etc.) (Anca et al., 2011). On the other hand, recent years have witnessed an increased interest of the Romanian academic environment regarding the involvement of universities in the process of disseminating and professionalization of CSR/sustainable development fields through housing and/or organizing of meetings, seminars, conferences, workshops, theoretical debates on the above-mentioned topics.

Although the majority of the public universities have already brought their academic missions up-to-date by incorporating goals like innovation, progress, as well as promotion of scientific, social, cultural and ethical principles within regional, national and international communities, the reality revealed that only few of them are absolutely devoted to their assumed objectives in the area of CSR and took real actions towards the forming of entrepreneurial, team-work and other soft skills that are needed by the employers (Crețan, 2014).

As far as the implication of Romanian universities in CSR actions is concerned, a recent analysis performed by Dumitrașcu et al. (2014), showed that we can distinguish a few rather singular initiatives disclosed by academic institutions on their websites regarding cultural and civic projects, spiritual and moral programs, ecological activities, philanthropic campaigns, blood donation campaigns, educational fairs, social campaigns initiated and implemented by students etc. Like the other dimensions of CSR development in Romanian universities, managerial factors’ concern regarding CSR programs and activities represent an essential element that leaves much room for improvement.

Taking into account the aspects highlighted within the context of this paragraph, it becomes evident that the approach of Romanian universities on CSR education of forthcoming elites, has to be challenged and fast-paced transformed. Universities, which are assigned with the leading role in restructuring values, moral principles and mind-sets that define the Romanian society, must behave as visible, responsible and involved actors within the communities they operate in (Nicolescu, 2006).

2.2. The Polish case

Educational services play an essential role in the Polish economy, where the share of services in the creation of the gross domestic product experienced a rapid expansion in recent years. Thus, 318 universities out of 448 higher education institutions are private in Poland. The high percentage of private academic institutions which are active in Poland develops some peculiarities upon the higher education system. For instance, the fact that private universities are not financed from the government’s budget makes them more vulnerable to changes occurred within their environment; for that reason, the sector of higher education gives a lot of attention to any marketing tool that is supposed to contribute to its market extension. However, there are many voices in the literature that point out the risk that emerges from the approach that equate CSR with a collection of image improvement instruments. In this respect, the main objective would be to strengthen the presence of responsible academic institutions that really bring their contribution to the well-being of the country, rather than constructing a social responsible image of the higher education institution without any substantial content (Geryk, 2016).

Besides the emergence of social responsible universities, there are many articles, newspapers, organizations and statistical data which witness a significant increase in interest
in Poland, regarding the issue of CSR and business ethics. As an outcome of debates increasing on CSR/business ethics, the number of scientific publications that approaches the theme of CSR has been highly proliferated (Tormo-Carbo et al., 2016). Thus, according to Wolczek (2015), approximately 200 scientific papers that relate directly or indirectly to the subject of CSR, were issued in 2013. In addition, several books published in Poland focused entirely on the subject of responsible education and/or the emergence of responsible universities: Social Responsibility of the University (Geryk, 2016); Responsible Management Education (Gasparski, 2008); Business Ethics as a teaching Subject (Gasparski & Lewicka-Strzałecka, 2001).

Within the Polish context, where the magnitude of socio-economic reforms and changes occurred in educational policies sphere were significant in latest years, CSR education became the subject matter for a wide range of demarches (such as conferences, seminars, workshops, panel discussions etc.). The higher education system in Poland was also profoundly transformed as a result of adopting the so-called Bologna Process. Thus, the core curricula for Management studies established by the Ministry of Science and Higher Education after 2007, incorporated ethics between the main compulsory five fundamental subjects to be studied in order to acquire Master’s degree in Management. More recently, in 2011, the Polish government laid a particular emphasis on defining and measuring the learning outcomes attained by graduates at the end of each qualification level. Three types of educational outcomes were considered: knowledge, skills and social competences.

This new approach compelled universities to perform substantial modifications in the curricula of various types of study programs. Such modifications imposed that higher education institutions have to consider ethics as a distinct study program in the field of Management, but also to assimilate it as a basic subject embedded in various fields of study. In spite of these positive evolutions, we must also mention that ethics covers just a limited area of issues that fall under the umbrella CSR concept. However, there are some universities in Poland which replaced business ethics with courses on CSR in order to suit both students’ and employers’ expectations (Tormo-Carbo et al., 2016). For instance, AGH University of Science and Technology established Corporate Social Responsibility as a compulsory subject in the curricula for the Master’s Degree in Management (AGH-UST, 2016). Currently, as shown in table 1, there are many well-known Polish higher education institutions that deliver programs and classes related to CSR issues. Unfortunately, most frequently these courses are offered as fee post-graduate courses which require the payment of tuition fees (Wolczek, 2015).

Many of these post-graduated programs were established with the help of EU co-financing schemes, which were widely accessed by Polish universities.

Regardless of the wide-accepted recognition of the importance of CSR/business ethics courses in the process of shaping a healthy CSR culture for the generations to come, the impact of this specific subjects on students’ level of knowledge in the field is rather questionable. Thus, according to Ujęcie teoretyczne idei CSR, “the efficiency of teaching the corporate social responsibility in Polish higher education institutions is low due to the lack of adequately qualified personnel, the level of awareness, as well as outdated curricula” (Ujęcie teoretyczne idei CSR, 2013).

Although pessimistic, this statement is in line with the conclusion indicated by the study conducted in 2014 by the Responsible Business Forum in cooperation with PBS. Using a representative sample of alumni of Responsible Business League editions carried out between 2004 and 2014, the research induced the opinion that there is a considerable gap between young students’ demands about obtaining relevant CSR knowledge and higher institutions’ view on the same issue. Thus, according to the majority of the respondents, universities tend to neglect or selectively approach the subject of CSR (RBF, 2015).
Table 1. Sample programs and courses concerning the CSR concept offered by Polish higher education institutes

<table>
<thead>
<tr>
<th>Program/Course</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR, Responsible business strategy.</td>
<td>Kozminski University</td>
</tr>
<tr>
<td>CSR Manager</td>
<td>Collegium Civitas</td>
</tr>
<tr>
<td>Corporate social responsibility (CSR)</td>
<td>Wrocław University of Economics</td>
</tr>
<tr>
<td>Socially responsible business</td>
<td>Katowice University of Economics</td>
</tr>
<tr>
<td>Socially responsible business</td>
<td>Poznań University of Economics</td>
</tr>
<tr>
<td>Corporate social responsibility (CSR)</td>
<td>University of Warsaw</td>
</tr>
<tr>
<td>CSR – Corporate social responsibility</td>
<td>College of Enterprise and Administration in Lublin</td>
</tr>
<tr>
<td>Strategy of corporate social responsibility (CSR)</td>
<td>Warsaw University of Life Sciences – SGGW</td>
</tr>
<tr>
<td>Social entrepreneurship and CSR</td>
<td>Janusz Korczak Pedagogical University in Warsaw</td>
</tr>
</tbody>
</table>


In other words, the ineffectiveness of CSR courses remains a quite alarming problem in Poland, as well as in Romania, in spite of the efforts made by the two countries in order to follow the global trend of involving academic institutions in the process of promoting and shaping a new culture of social responsibility.

3. CSR Awareness among the Bachelor students from the University of Petroșani – An Empirical Study

Our empirical study comprises a statistical experiment conducted in July 2016, by using a sample of 100 Bachelor graduates from the University of Petroșani. The University is a representative institution for higher education in mineral resources area in Romania which experienced a radical change after 1989, being compelled both to meet the requirements of a demanding labour market and to face unexpected changes in demographic trends. As a result of these transformations, the educational offer expanded over the years, both for bachelor and master studies, so that, currently, the University delivers 25 Bachelor programs, 18 Master programs and 5 Doctoral fields. Nowadays, approximately 3,300 students are enrolled within the three Faculties – Faculty of Mines; Faculty of Mechanical and Electrical Engineering; Faculty of Science – and the Doctoral School.

As far as responsible education is concerned, some components of the CSR concept – such as business ethics, quality management, occupational safety and health, sustainable development etc. – can be found as basic subjects of curricula for many of the Bachelor programs offered by the University of Petroșani: Management; Economy of Services, Commerce and Tourism; Quality Engineering and Management; Industrial Environment Engineering and Protection; Safety Engineering in Industry; Social Assistance; Sociology. Besides, other practical activities incorporated in the curricula as well as students’ volunteering initiatives drew our graduates near CSR concept and practices. Taking into consideration employers’ demands regarding the changing of curricula for Bachelor studies, the following questions raised: What are the main factors that influence CSR level of awareness among the Bachelor students? and Is there a comprehensive subject of CSR welcomed in the Bachelor curricula? In this respect, our respondents had to fill out a questionnaire, assessing their level of awareness regarding CSR concept with the help of a scale of 0-100.

In the experiment conducted on the sample of 100 respondents, four different types of Bachelor graduates, we tested the level of theoretical and practical knowledge gained by them.
in the field of CSR area by covering subjects in the curricula and/or involvement in volunteering activities (experimental factor):
A – students without involvement;
B – students with low involvement;
C – students with average degree of involvement;
D – students with high involvement.

The experiment was based on 2 blocking factors:
• graduated area (1 – Social Sciences; 2 – Economics 3 – Engineering, 4 – IT/Mathematics);

In order to assess the impact of three factors of interest on CSR level of awareness we designed a Latin Square with one primary and two secondary factors. The design for the Latin Square with 4-level factors is given next. This design shows the treatment combinations for each run where the treatments are random within rows and columns, with each treatment once per row and once per column.

Table 2. Latin Square Design

<table>
<thead>
<tr>
<th>i</th>
<th>j</th>
<th>k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row blocking factor</td>
<td>Column blocking factor</td>
<td>Treatment factor</td>
</tr>
<tr>
<td>1</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td>1</td>
<td>II</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>III</td>
<td>C</td>
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<tr>
<td>1</td>
<td>IV</td>
<td>D</td>
</tr>
<tr>
<td>1</td>
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<td>B</td>
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<td>2</td>
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<td>4</td>
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</tr>
<tr>
<td>4</td>
<td>IV</td>
<td>C</td>
</tr>
</tbody>
</table>

Source: own results.

with:

n = 3 factors (2 blocking factors and 1 primary factor);
m = 4 levels of factor i (block);
m = 4 levels of factor j (block);
m = 4 levels of factor k (primary);
N = m² = 16 total number of observations.
This can alternatively be represented as:

\[
\begin{array}{cccc}
A & B & C & D \\
B & C & D & A \\
C & D & A & B \\
D & A & B & C \\
\end{array}
\]

Table 3 shows the CSR level of awareness in each of the above situations.

Through this experiment, we tested whether there are significant differences in the CSR level of awareness among the four types of graduates considering a significance level of 0.05.

Table 3. Experimental data

<table>
<thead>
<tr>
<th>Graduated area</th>
<th>School performance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>200</td>
</tr>
</tbody>
</table>

Source: own results.

Firstly, we have formulated the null hypothesis \( H_0 \) as follows: the three factors – level of involvement in educational and/or practical CSR activities, graduated area and school performance – does not significantly influence the CSR level of awareness.

The following notation will be used:

- \( m \) = number of treatments, rows, columns;
- \( i \) = row, \( j \) = column, \( k \) = treatment (experimental unit);
- \( x_{ijk} \) = the dependent variable (the observation for the \( k^{th} \) treatment within the \( i^{th} \) row and \( j^{th} \) column);
- \( N = m^2 \) = total number of observations;
- \( T_i \) = the sum for row \( i \);
- \( T_j \) = the sum for column \( j \);
- \( T_k \) = the sum for treatment \( k \);
- \( T \) = total of the contingency table;
- \( C \) = the correction factor (\( C = \frac{T^2}{m^2} \)).

The ANOVA for a Latin Square Design involves: row/column/treatment degrees of freedom: \( m - 1 \); total degrees of freedom: \( N - 1 = m^2 - 1 \); the sum of squares for rows: \( \text{SSR} \); the sum of squares for columns: \( \text{SSC} \); the treatment sum of squares: \( \text{SSTr} \); the error sum of squares: \( \text{SSE} \); the total sum of squares: \( \text{SSTot} \).

The total sum of squares for the Latin Square Design is partitioned into 4 components:

\[
\text{SSQ}_{\text{Tot}} = \sum_{i=1}^{m} \sum_{j=1}^{m} \sum_{k=1}^{m} x_{ijk}^2 - C \\
\tag{1}
\]

\[
\text{SSQ}_{\text{Tot}} = \text{SSQ}_R + \text{SSQ}_C + \text{SSQ}_{Tr} + \text{SSQ}_E \\
\tag{2}
\]
Formulas to calculate SSQR, SSQC, SSQTr, SSQE are:

\[ SSQR = \frac{1}{m} \sum_{i=1}^{m} T_{i}^2 - C \]  
(3)

\[ SSQC = \frac{1}{m} \sum_{j=1}^{m} T_{j}^2 - C \]  
(4)

\[ SSQTr = \frac{1}{m} \sum_{k=1}^{m} T_{k}^2 - C \]  
(5)

\[ SSQE = SSQTot - (SSQR + SSQC + SSQTr) \]  
(6)

In order to test the statistical significance, we have determined the calculated value of F.

\[ F_{value} = \frac{SSQTr}{m-1} : \frac{SSQE}{(m-1)(m-2)} \]  
(7)

If F statistic in the test is smaller than F value, the null hypothesis is rejected. The results of the analysis are summarized in a Latin Square Design ANOVA Table, as shown below.

Table 4. Latin Square Design ANOVA Table

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of freedom</th>
<th>Sum of squares (SSQ)</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rows (R)</td>
<td>m-1</td>
<td>SSQR = 1150</td>
<td>FR = 6.8148</td>
</tr>
<tr>
<td>Columns (C)</td>
<td>m-1</td>
<td>SSQC = 750</td>
<td>FC = 4.4444</td>
</tr>
<tr>
<td>Treatments (Tr)</td>
<td>m-1</td>
<td>SSQTr = 9262.5</td>
<td>FTr = 54.8889</td>
</tr>
<tr>
<td>Error (E)</td>
<td>(m-1)(m-2)</td>
<td>SSQE = 337.5</td>
<td>-</td>
</tr>
<tr>
<td>Total (Tot)</td>
<td>m²-1</td>
<td>SSQTot = 11500</td>
<td>-</td>
</tr>
</tbody>
</table>

Decision: H₀ is rejected as F_{value} (54.8889) > F_{tab}(4.76)

Source: own results.

Since F value exceeds F statistic, the null hypothesis H₀ is rejected. Therefore, there is a significant relationship between the level of involvement in educational and/or practical CSR activities and the real CSR level of awareness.

Conclusion

Our research proved undoubtedly that social responsibility has become a significant dimension of development both at the micro and macroeconomic level. Thus, internationally renowned companies designate nowadays impressive amounts of their annual revenues in order to draw adequate CSR budgets. In that view, top-level managers consider these figures a long-term investment with consequential outcomes upon the future of their business. Governments and international organizations became aware of the positive link between sustainable development of modern nations and the process of adopting CSR values and programs by an increasing number of organizations of various types and profiles.
In spite of some inherent obstacles emerged during the embryonal stage of CSR implementation, we believe that Poland and Romania are following the global trend of deepening understanding regarding the relevance of CSR concept and its synergic effects both for the individuals and the society. As we highlighted in the content of our paper, universities are expected to take the leading role in the process of transferring CSR knowledge and practices to the society. Topics like CSR, business ethics and/or sustainable development are expected to have a decisive impact on the awareness of future managers and economic leaders. Our empirical study is not only an evidence of this statement, but its results also urges academic managers for further reflection on the idea of initiating Master’s Degree studies on CSR, or at least expanding CSR courses in the curriculum of the existing Bachelor and Master specializations. In this respect, a future avenue of research for us would be to explore students’ degree of satisfaction regarding CSR knowledge acquired within Bachelor studies among the students of the Faculty of Management of Czestochowa University of Technology (Poland). Furthermore, we intend to analyse the opportunity of a new collaborative master program on CSR, supported by renowned academics and practitioners from Romania and Poland.

References


