


“Higher education institutions as a driver of sustainable social development: Polish experience for Ukraine”

AUTHORS

Inna Khovrak  <https://orcid.org/0000-0002-0352-4374>
 <https://publons.com/researcher/2007546/inna-khovrak/>

ARTICLE INFO

Inna Khovrak (2020). Higher education institutions as a driver of sustainable social development: Polish experience for Ukraine. *Environmental Economics*, 11(1), 1-13. doi:[10.21511/ee.11\(1\).2020.01](https://doi.org/10.21511/ee.11(1).2020.01)

DOI

[http://dx.doi.org/10.21511/ee.11\(1\).2020.01](http://dx.doi.org/10.21511/ee.11(1).2020.01)

RELEASED ON

Wednesday, 04 March 2020

RECEIVED ON

Friday, 31 January 2020

ACCEPTED ON

Monday, 02 March 2020

LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

JOURNAL

"Environmental Economics"

ISSN PRINT

1998-6041

ISSN ONLINE

1998-605X

PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

23



NUMBER OF FIGURES

3



NUMBER OF TABLES

9

© The author(s) 2026. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 31st of January, 2020

Accepted on: 2nd of March, 2020

Published on: 4th of March, 2020

© Inna Khovrak, 2020

Inna Khovrak, Ph.D., Associate Professor, Accounting and Finance Department, Kremenchuk Mykhailo Ostrohradskyi National University, Ukraine.

Inna Khovrak (Ukraine)

HIGHER EDUCATION INSTITUTIONS AS A DRIVER OF SUSTAINABLE SOCIAL DEVELOPMENT: POLISH EXPERIENCE FOR UKRAINE

Abstract

The basis for sustainable and environmentally friendly development is gradually becoming aware of the importance of working more ethically and transparently and in a more humanistic way, as well as addressing the needs of people and society. In this case, the key challenge for higher education institutions (HEIs) is to train the conscious and responsible citizens who can take care of the country's future. This article focuses on comparing the ability of HEIs in Poland and Ukraine to promote sustainable development (SD) by implementing the concept of social responsibility (SR). The research is based on the methods of statistical analysis, sociological survey, case study, abstract-logical, tabular and graphical method. The paper argues that HEIs have a wide range of tools to promote SD. These tools should be divided into three groups, namely: 1) including SD issues in educational programs; 2) developing knowledge and solutions for SD; 3) creation and participation in SR initiatives. The proposed mechanism of the impact of HEIs on SD through the implementation of the concept of SR will allow HEIs to take an active part in the life of the region and the country, namely: identify the needs, engage the stakeholders, facilitate the interaction, disseminate the effective practices, and develop SD strategies. The practical value of the obtained results is that the implementation of SR initiative by HEIs will promote the environmentally friendly development of the country and regions. As a result, it will increase the impact of HEIs on economic, technology and cultural development, human capital formation, solving social problems, building civil society, improving the environmental status.

Keywords

education, sustainability, responsibility, region, survey, impact, mechanism

JEL Classification

Q01, I23

INTRODUCTION

In response to the cultural, social, and technological changes of the 20th century, society has formed an understanding of the importance of working more ethically and transparently and in a more humanistic way. Experts argue that the success of companies, regions, and countries in the 21st century depends on the ability of leaders to consider ethics that reach beyond self-interest and to make decisions that will contribute to sustainable development (Dzwairo, Nombela, & Perumal, 2017). A rapid and enormous change in a highly competitive market expects from HEI to develop competences and skills that were previously not required (Kvasničková Stanislavská, Kvasnička, Kuralová, & Margarisová, 2014), as well as taking into account the needs of people and society (De Ketele, 2009). In this case, the key challenge for the HEIs is "to provide well-prepared graduates who could engage with the complex social, political, and environmental challenges facing society" (Govender, 2016). Accordingly, HEIs should encourage greater accountability of people and companies for influencing the society by promoting



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.



Conflict of interest statement:

Author(s) reported no conflict of interest

co-operation for sustainable development (SD) through “the critical uses of knowledge in society and the economy” (Herrera, 2009). At the same time, the acceleration of business processes exacerbates the environmental impact and exacerbates environmental problems. However, joint action by businesses and HEIs can increase the effectiveness of finding solutions to create a safer environment. That is why, the environmental aspects of SD deserve special attention. Therefore, the ability of HEIs to implement environmental initiatives and programs and to develop a culture of natural resources sustainable management is important.

1. LITERATURE REVIEW

The concept of SD is the answer to “mounting environmental problems, socio-economic issues to do with poverty and inequality and concerns about a healthy future for humanity” (Hopwood, Mellor, & O’Brien, 2005). Pirmana, Alisjahbana, Hoekstra, and Tukker (2019) argue that a system of environmental-economic accounting is the basis for monitoring the achievement of sustainable development indicators. It is important to understand the results of business activities and behavior on the environmental and resource impacts of products and services (Lucia & Grisolia, 2019). SD is achieved through the interaction and shared responsibility of different stakeholders.

Education allows building peace and promoting the SD. That is why the main priority of UNESCO’s activities is “to lead and coordinate the Education 2030 Agenda, which is part of a global movement to eradicate poverty through 17 Sustainable Development Goals by 2030” (UNESCO, 2017). According to experts, the current conditions have led to the integration of education into SD and of SD into education (Grosbeck, Tiru, & Bran, 2019). In this context, it is necessary to rethink the role of higher education in the development of society, the achievement of economic growth, environmental protection, social stability, an increase of civic activity. Social responsibility (SR) of HEIs becomes the normative expectation of modern HEIs by the general public (Vasilescu, Barna, Epure, & Baicu, 2010). Most UK HEIs are aware of their responsibility to all their stakeholders. They are interested in demonstrating this awareness in different ways (inspiring and supporting staff/students to grow, assessing the economic, social, and environmental impacts of their activities, enhanced collaboration with

all stakeholders, responding to regional needs) (D. Sharma & R. Sharma, 2019). The major challenges facing Asia’s HEIs include a willingness to “practice social responsibility not only to their direct stakeholders (students and parents) but also to the community where they are operating and society in general” (Bandalaria, 2018), as well as understanding the need for participation in achieving the SDGs by integrating the different SDGs into the curriculum, research, campus management, etc. In 2015, The Hong Kong Polytechnic University created an initiative titled University Social Responsibility Network (USRN).

SR of HEIs reflects the ability of HEIs to meet the needs of stakeholders. SR of HEIs aims to respond opportunely to all the actors involved in the HEIs activity, those who participate in the HEI work, and those who are influenced by this HEI (Ramos-Monge, Llinàs-Audet, & Barrena-Martínez, 2019). Also, SR of HEIs is crucial for developing the transformative potential of students as agents and of sustainable future (Filho, Raath, Lazzarini et al., 2018). Modern society “requires a revolution in the training of future generations of learners so that they can devise solutions for sustainability dilemmas in environments characterized by uncertainty, information deficits, and asymmetric power relationships” (Hardin, Bhargava, Bothner et al., 2016). For such reasons, the ability to apply the SR concept is one of the priorities for the development of modern higher education. However, previous studies have shown that Ukrainian HEIs lack a systematic approach to the implementation of SR concept (Khovrak, 2019b), which actualizes the need to study the Polish experience and to assess the possibility of its implementation in Ukraine. A misunderstanding of the SR of HEIs concept may adversely affect its implementation in HEIs.

2. AIM AND METHODS

This article focuses on comparing the ability of higher education institutions in Poland and Ukraine to promote sustainable development by implementing the concept of social responsibility.

The theoretical and methodological basis of the study is the concepts of SD, corporate SR, and university SR. The research is based on the method of statistical analysis (based on 162 countries' data on the achievement of the Sustainable Development Goals, the minimum, average, and maximum values were determined, as well as the deviation of Poland and Ukraine from the calculated indicators), the method of sociological survey (the representatives of more than 60 HEIs in Poland and Ukraine were surveyed based on the original online survey), the case study method (based on the data from 40 Polish HEIs, a list of the most effective social responsibility practices was compiled), the abstract-logical method (to develop the mechanism of the impact of the HEIs on SD through the introduction of SR concept), the tabular and graphical method (for visual display of the received data).

3. RESULTS

3.1. The level of achievement of the UN Sustainable Development Goals in Poland and Ukraine

The need to address global issues such as climate change and biodiversity loss has led to the endorsement of the UN Sustainable Development Goals (SDGs). According to the Sustainable Development Report (2019), Poland ranks 29th in the ranking, while Ukraine ranks 41st out of 162 countries. Poland has a slightly lower score than the regional average: the country's SDG Index stands at 75.9, but for the OECD countries, stands at 77.7. At the same time, Ukraine has slightly higher results than the regional average: the country's SDG Index stands at 72.8, and for Eastern Europe and Central Asia, stands at 70.4. Poland holds the top positions in achieving such goals as SDG 15 (3 out of 162 countries), SDG 1 (13), and SDG 8 (14). Ukraine is best placed to achieve such goals as SDG 10 (5 out of 162 countries), SDG 1 (23), and SDG 17 (29). Based on 162 countries' da-

Table 1. Summary statistics for SDGs in Poland and Ukraine

Source: Calculated by the author based on the data from the Sustainable Development Report (2019).

SDG	Poland					Ukraine				
	Score	Rank	Deviation from			Score	Rank	Deviation from		
			Mean	Min	Max			Mean	Min	Max
No poverty	99.9	13	25.5	99.9	-0.1	99.7	23	25.3	99.7	-0.3
Zero hunger	61.2	37	7.6	42.2	-16.7	53.1	87	-0.5	34.1	-24.8
Good health and well-being	87.6	36	17.6	70.0	-10.3	71.8	92	1.8	54.2	-26.1
Quality education	94.4	44	17.5	86.0	-5.5	92.6	56	15.7	84.2	-7.3
Gender equality	71.1	45	10.9	60.7	-18.1	62.8	81	2.6	52.4	-26.4
Clean water and sanitation	82.0	37	14.4	54.5	-15.0	80.0	40	12.4	52.5	-17.0
Affordable and clean energy	89.7	58	18.5	89.7	-9.7	91.6	42	20.4	91.6	-7.8
Decent work and economic growth	84.4	14	12.8	47.9	-6.2	68.4	111	-3.2	31.9	-22.2
Industry, innovation, and infrastructure	54.9	34	19.8	53.0	-38.4	25.2	96	-9.9	23.3	-68.1
Reduce inequality	53.7	88	-5.4	53.7	-46.3	99.0	5	39.9	99.0	-1.0
Sustainable cities and communities	78.5	73	6.7	50.7	-19.8	76.0	87	4.2	48.2	-22.3
Responsible consumption and production	73.7	109	-3.7	51.5	-25.6	80.4	91	3.0	58.2	-18.9
Climate action	89.2	99	2.6	55.8	-10.2	95.6	34	9.0	62.2	-3.8
Life below water	43.7	86	-6.8	35.0	-37.6	38.6	102	-11.9	29.9	-42.7
Life on land	92.0	3	27.2	68.5	-1.3	63.5	87	-1.3	40.0	-29.8
Peace, justice, and strong institutions	81.4	26	15.4	50.3	-11.6	61.9	100	-4.1	30.8	-31.1
Partnership for the goals	53.4	126	-11.1	26.2	-46.6	77.9	29	13.4	50.7	-22.1

ta on the achievement of the SDGs, the minimum, average, and maximum values were determined, as well as the deviation of Poland and Ukraine from the calculated indicators (Table 1).

At the same time, one of the highest indicators for both countries is the achievement of SDG 4, namely 94.4 for Poland (higher than SDG Index by 24.4%) and 92.6 for Ukraine (higher than SDG Index by 27.2%). In view of such a high score on the achievement of Goal 4 “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all,” it is important to understand whether HEIs in countries influence the promotion of SD and its achievement.

3.2. Impact of HEIs on SD

The survey was attended by 119 representatives from 18 Polish HEIs and 154 representatives from 51 Ukrainian HEIs. The data were collected through an original online survey in 2019. The majority of respondents were faculty/staff member (65.5% of the total number of respondents in Poland and 44.8% – in Ukraine), and the smallest were rectors/directors/vice-rectors (0.8% of the total number of respondents in Poland and 4.6% – in Ukraine). Also, a significant proportion of respondents were students (21.9% of the total number of respondents in Poland and 22.7% – in Ukraine) and heads of departments (8.4% of the total number of respondents in Poland and 14.3% – in Ukraine). In both countries, about 2/3 of the respondents are women, and 1/3 are men. The largest number of respondents belongs to the age

group of 36-45 years (31.1% of the total number of respondents in Poland and 40.3% – in Ukraine), and the smallest – to the age group above 65 (1.7% of the total number of respondents in Poland and 1.9% – in Ukraine). Summarized data on the demographic characteristics of respondents from selected regions are shown in Table 2.

Survey results show that 82.4% (Poland) and 89.0% (Ukraine) of all respondents in the country reflected on the impact of HEIs on society. However, only 42.9% (Poland) and 31.2% (Ukraine) of respondents could read HEIs’ reports on their impact on society. Respondents’ low interest in receiving social responsibility information from HEIs’ from reports may have been due to lacking widespread practice of data reporting and low level of stakeholder awareness of their existence.

At the same time, the direct impact of HEIs on the formation of human capital is indicated by 73.9% and 75.3% of all respondents in Poland and Ukraine, respectively, technology development – by 54.6% and 73.4%, cultural development – by 42.0% and 68.8%, building civil society – by 37.8 % and 55.8%, economic development – by 36.1% and 43.5%, solving social problems – by 21.0% and 29.9%, improving the environmental status – by 21.0% and 16.9%. It should be added that a small number of respondents noted the insufficient influence of HEIs. In general, similar trends have emerged in Poland and Ukraine regarding the impact of HEIs on economic, social, environmental, and other aspects of society’s development (Table 3).

Table 2. Demographic characteristics of the respondents, %

Source: Authors’ calculations based on own survey.

Criterion	Options	Poland	Ukraine
Position	Rectors/directors/vice rectors	0.8	4.6
	Dean/deputy dean	1.7	7.8
	Heads of departments	8.4	14.3
	Faculty/staff member	65.5	44.8
	Student	21.9	22.7
	Other	1.7	5.8
Gender	Female	61.3	73.4
	Male	38.7	26.6
Age	Below 25	16.8	23.4
	26-35	22.7	22.1
	36-45	31.1	40.3
	46-55	17.6	9.7
	56-65	10.1	2.6
	Above 65	1.7	1.9

Table 3. Respondents' answers to the question: Select the most appropriate statement to describe the level of HEIs' impact

Source: Authors' calculations based on own survey.

Criterion	Options	Poland	Ukraine
Economic development	Direct influence	36.1	43.5
	Indirect influence	61.4	53.9
	No influence	2.5	2.6
Technology development	Direct influence	54.6	73.4
	Indirect influence	36.1	22.7
	No influence	9.3	3.9
Human capital formation	Direct influence	73.9	75.3
	Indirect influence	26.1	23.4
	No influence	0.0	1.3
Solving social problems	Direct influence	21.0	29.9
	Indirect influence	66.4	66.2
	No influence	12.6	3.9
Building civil society	Direct influence	37.8	55.8
	Indirect influence	52.1	40.9
	No influence	10.1	3.3
Cultural development	Direct influence	42.0	68.8
	Indirect influence	52.1	27.9
	No influence	5.9	3.3
Improving the environmental status	Direct influence	21.0	16.9
	Indirect influence	59.7	68.8
	No influence	19.3	14.3

However, the positive fact is that HEIs understand that their social responsibility helps to make a positive impact on regional development. The concept of social responsibility is quite well-known in the academic environment. Thus, 16% and 7.1% of respondents consider themselves experts in this field (Poland and Ukraine, respectively), 61.3% and 44.8% know the basic points, 17.7% and 38.3% know some facts and only 5.0% and 9.8% said the concept was not familiar to them (Table 4).

Table 4. Respondents' answers to the question: How well do you know the concept of social responsibility?

Source: Authors' calculations based on own survey.

Options	Poland	Ukraine
The concept is not familiar to me	5.0	9.8
I know some facts	17.7	38.3
I know the basic concepts	61.3	44.8
I am an expert in this field	16.0	7.1

The study also assessed the readiness of HEIs to implement the concept of social responsibility (Table 5). It was found that the respondents felt that their HEIs had much better potential for the implementation of this concept than other HEIs in the country. This is a common trend for both countries.

Table 5. Respondents' answers to the question: Please evaluate the readiness of the higher education institution to implement the concept of social responsibility

Source: Authors' calculations based on own survey.

Criterion	Options	Poland	Ukraine
Willingness to implement at the level of a HEIs	I do not know	14.3	7.8
	No, practically none	2.5	3.9
	No, nothing much	23.5	12.3
	Yes, somewhat	42.9	42.2
	Yes, very much	16.8	33.8
Willingness to implement at the country level	I do not know	23.5	11.7
	No, practically none	6.7	1.3
	No, nothing much	22.7	30.5
	Yes, somewhat	37.8	48.1
	Yes, very much	9.3	8.4

It is important to add that quite a few respondents have studied the aspects related to the concept of social responsibility in HEIs (Table 6). However, 63.9% of respondents in Poland and 61.7% in Ukraine strongly agree with the statement "the concept of social responsibility should be studied in HEIs".

The survey also highlighted the main motives and obstacles for implementing the SR of HEIs concept

Table 6. Respondents' answers to the question: Please indicate the most appropriate answer to each statement

Source: Authors' calculations based on own survey.

Statement	Options	Poland	Ukraine
I studied the aspects related to the concept of social responsibility at the HEIs	Totally agree	18.5	17.5
	Partially agree	48.7	57.2
	Disagree	32.8	25.3
The aspects related to the concept of social responsibility must be studied at the HEIs	Totally agree	63.9	61.7
	Partially agree	33.6	35.7
	Disagree	2.5	2.6
HEIs should implement social responsibility programs	Totally agree	75.7	75.3
	Partially agree	19.3	24.0
	Disagree	5.0	0.7

(Tables 7-8). The main motives that drive HEIs to implement the SR concept in Poland are building a strong and well-known brand (21.0% of respondents chose this answer), request of stakeholders (students, partners, communities, etc.) to help (15.6%) and actions of other universities (14.3%). The main motives that drive HEIs to implement SR concept in Ukraine are HEIs advertising (16.6% of respondents chose this answer), international experience (16.1%), and building a strong and well-known brand (15.3%). Respondents' answers to

Ukraine indicate an insufficient level of interest in cooperating with stakeholders (8.9%) and maintaining social stability in the region (8.9%).

The main obstacles to using SR concept of HEIs are lack of time/motivation of teachers/staff to change (23.3% of respondents in Poland and 24.1% of respondents in Ukraine chose this answer), financial costs (14.3% and 17.8%), and lack of interest in local community/government (12.7% and 16.9%). It is important to add that only 11.9% of respondents

Table 7. Respondents' answers to the question: What are the main reasons, in your opinion, encourage HEIs to implement the concept of social responsibility (multi-selection possible)?

Source: Authors' calculations based on own survey.

Options	Poland	Ukraine
Advertising	9.4	16.6
Actions of other universities	14.3	9.6
Building a strong and well-known brand	21.0	15.3
Request of stakeholders (students, partners, communities, etc.) to help	15.6	8.9
Solving internal problems of the university	7.8	12.3
Administration's decision	10.2	12.3
Preservation of social stability in the region	9.1	8.9
International experience	12.6	16.1

Table 8. Respondents' answers to the question: What are the main obstacles to using the concept of corporate responsibility at your HEIs (multi-selection possible)?

Source: Authors' calculations based on own survey.

Options	Poland	Ukraine
Lack of time/motivation of teachers/staff to change	23.3	24.1
Lack of interest of local community/government	12.7	16.9
Lack of capacity building	7.8	6.3
Lack of experience/knowledge about the concept	11.9	12.4
Corporate responsibility is not a priority for the university	12.2	6.5
The concept is suitable for business only	1.6	0.7
Financial costs	14.3	17.8
Nobody asked/did not offer	8.1	5.4
The belief that such activity cannot have a real impact on the development of the region	4.9	5.6
The state and local authorities should take care of the development of the region	3.2	4.3

in Poland and 12.4% of respondents in Ukraine acknowledged a lack of experience/knowledge of the SR concept. However, only 16.0% of respondents in Poland and 7.1% of respondents in Ukraine consider themselves SR experts. That is, not all respondents can openly speak about a lack of experience since it is much easier to admit to a lack of time or interest from the local community or authorities. It is important to add that only 1.6% of respondents in Poland and 0.7% of respondents in Ukraine believe that SR concept is only for business.

3.3. SR practices of the Polish HEIs

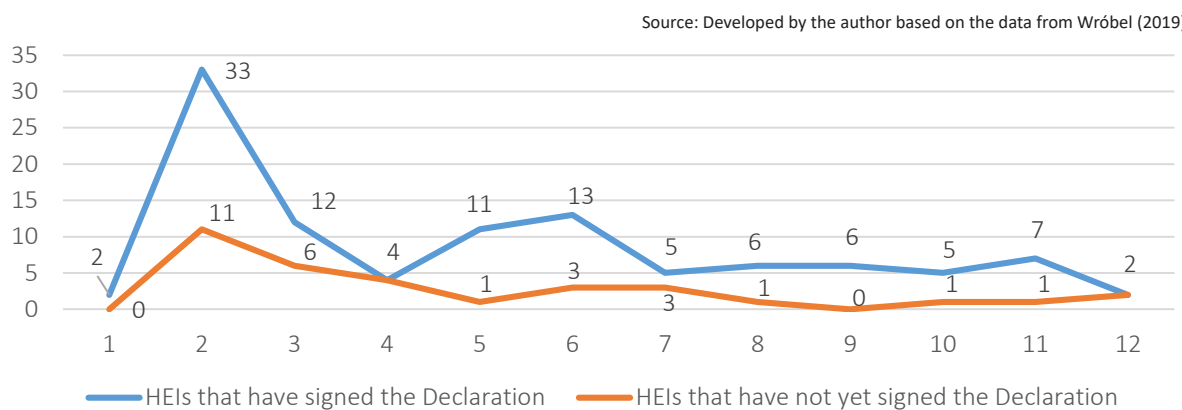
From November 2017, Polish HEIs has the opportunity to join the initiative of the Ministry of Development and the Ministry of Science and Higher Education to sign the Declaration of HEIs' SR (2017). During 2017–2019, 83 HEIs signed the declaration. To evaluate the degree of implementation of the SR concept, representatives of the ministry working group invited about 400 state and non-state HEIs to participate in the survey. As a result, 40 HEIs accepted the invitation, sending 139 cases. It should be added that the cases were sent both from signatories to the Declaration and from other HEIs who have not yet joined the initiative (Figure 1).

to the following principles: principle 2 (44 practices), principle 3 (18 practices), principle 6 (16 practices) and principle 5 (12 practices). The rest of the Declaration's principles apply to less than ten practices. As HEIs should be considered as a driver of sustainable development, it is necessary to analyze the existing practices presented in the Catalog for compliance with the SDGs (Figure 2). Thus, the largest number of practices aims at achieving goals such as SDG 4 (39 practices), SDG 3 (20 practices), SDG 10 (14 practices), and SDG 7 (13 practices).

Previous HEI research has identified six areas of SR of HEIs, namely (Khovrak, 2019a): education for sustainable development, SR science, responsible campus, dialogue with society, SR culture, ethical leadership. Table 9 provides examples of SR practices that correspond to the following areas. Polish HEIs have established effective work on the implementation of the SR concept. Accordingly, the experience gained is the creation of a deputy rector or commission for SR affairs responsible for the development of the SR strategy, its implementation, the generation of reports, and the ongoing monitoring of SR of HEIs innovations. Developing a variety of codes of ethics (for students, graduate students, researchers, employees, etc.) is also quite popular.

Analyzing the practices of SR of HEIs in terms of the implementation of the Declaration items, it can be observed that HEIs pays the most attention

The analysis of the Polish HEIs case testifies to a wide range of social initiatives implemented by both public and private HEIs. So, HEIs imple-



Note: 1) preservation of academic values; 2) forming the social and civic attitudes of future elites; 3) spreading the idea of equality, diversity, tolerance, respect, and protection of human rights; 4) courses in ethics, corporate social responsibility, sustainable development, and social innovation; 5) implementation of projects that comply with the principles of social responsibility; 6) addressing important social problems; 7) development of national and international cooperation; 8) management of the HEIs on the principles of social responsibility; 9) ensuring transparency of HEIs activities; 10) minimizing the negative impact on the environment; 11) dialogue with stakeholders; 12) adherence to the principles of ethics and responsibility.

Figure 1. Number of SR practices under the items of the Declaration of HEIs' SR

Source: Developed by the author based on the data from Wróbel (2019).

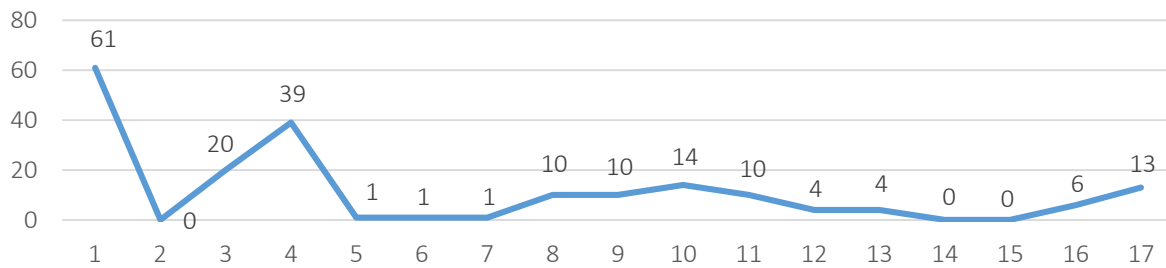


Figure 2. Number of SR practices of HEIs in Poland under the SDGs

ment SR practices that reflect the desire of HEIs to be socially responsible, as well as to encourage different stakeholders to be socially responsible. With the help of HEIs educational mission, they raise the awareness of students in the field of SR by creating courses and educational programs on social responsibility, business ethics, sustainable supply chains, and more. HEIs must conduct multi-stakeholder surveys on modifying educational programs, including the professional needs of the region. The organization of conferences, forums, meetings on the topic of SR allows creating the environmental awareness, promoting the ethics of relationships, responsible production, consumption and investment, as well as establishing the relationships with the business environment, public administration, and the public sector.

Accordingly, Polish HEIs actively promote local, regional, and national development. HEIs employ-

ees are involved in developing a strategy for the development of cities, regions, and countries. In addition, they support regional and local authorities in the field of strategic and operational management of processes and prepare expert reports commissioned by public authorities.

It is popular to set up science promotion centers, disseminate research results online and through YouTube. Much of SR practice is focused on maintaining equality and diversity in the academic environment through the organization of integration activities for international students, the activities of HEI's kindergartens, the support of people with disabilities, and more. Among the measures to ensure a responsible campus are pro-environmental measures, namely: monitoring of air quality, installation of devices that reduce the consumption of water and energy, used secondary materials, electronic document management, etc. Besides, Polish HEIs start to create its participa-

Table 9. SR examples of Polish HEIs

Source: Developed by the author based on the data from Wróbel (2019).

HEIs	The title of SR initiative	The essence of SR initiative
Education for sustainable development		
Kozminski University	Postgraduate Program "CSR. Sustainable Development Goals in Company Strategy"	The program provides knowledge on developing ethical and responsible business strategies using the UN SDGs, as well as acquiring the skills and competencies to effectively utilize the various tools of CSR management in today's company.
SGH Warsaw School of Economics	Corporate Social Responsibility Course	Each module begins with a theoretical introduction, contains case studies and case studies and comments from experts who are leaders in a particular topic.
SR science		
University of Silesia	Silesian Science Festival	Scientists and science promoters share their knowledge, innovative research findings and their applications in industry and economics, presenting inventions and new developments to the general public.
AGH University of Science and Technology	Ph.D. Skills Academy	Soft skills training, integration of the academic environment with other subjects, which supports the activity of doctoral students. The topics discussed at the meetings are related, among other things, to the mobility of doctoral students.

Table 9 (cont.). SR examples of Polish HEIs

HEIs	The title of SR initiative	The essence of SR initiative
Responsible campus		
University of Warsaw	University Volunteer Center	The main purpose is to support and promote active participation in civil society, as well as to support and initiate cooperation with the university environment through joint activities with non-governmental organizations and public institutions.
Wrocław University of Science and Technology	Supporting people with disabilities	A comprehensive approach to the problems faced by students with disabilities. Existing applications: specialized equipment borrowing (including computers, tablets, portable extenders and magnifiers, screening programs, voice recorders, Braille); personal assistant; adaptation of student hostels.
Dialogue with society		
Adam Mickiewicz University in Poznań	Science Shop	The research unit is usually free of charge to address the problems of civil society organizations or local communities that have limited or minimal resources to buy free-market expertise. In this way, the knowledge and science available at universities, with the knowledge, competences, and skills available to public organizations, local communities, trade unions, activists, and more, are met. The search for solutions is based on HEI's dialogue with the environment.
Białystok University of Technology	Children's University	Classes are addressed to elementary students, and their main purpose is to promote science and show that learning should not be boring and difficult - on the contrary, it can be a great opportunity and an opportunity to deepen their passions and interests.
Culture of SR		
Lodz University of Technology	IDEA BOX	The purpose of the project is to improve working conditions and study at the university. Staff and students can submit their ideas for the development of the HEIs
University School of Physical Education in Wrocław	Blood donation	An annual campaign to collect as much blood as possible involving students and staff.
Ethical leadership		
Silesian University of Technology	Silesian Center for Business and Sustainable Development	The main goal is to create an ethical business, to develop and promote ideas of sustainable development and corporate social responsibility, namely to support entrepreneurs in the development of CSR strategies, to promote the principles of sound and sustainable management based on modern management methods and the use of clean technologies.
Warsaw Management University	Academy of Management Competences	The key task is to organize free training for students, alumni, and the local community in responsible management. Training is held by top managers of well-known enterprises, both domestic and international. Training is held regularly.

tion budgets, which aim to involve the academic community in the development and improvement of HEIs' activities.

3.4. Mechanism of HEIs impact on SD through the implementation of SR concept

One of the tools that enable the implementation, and development of the HEIs social mission is the SR strategy. The implementation of this strategy implies two results of the following process:

- 1) outputs (practical recommendations for decision-making/justification of sustainable development policy for state, regional and local authorities, business environment, investors and heads of NGOs); and

- 2) outcomes (understandings, frameworks, and models that promote awareness of sustainable development and social responsibility in society create the basis for future collaborative projects and initiatives). It is important that the development, implementation, and monitoring process of HEI's SR-Strategy is reflexive and iterative, which is important for dealing with complex systems.

It is suggested to use the RE-AIM (reach, effectiveness, adoption, implementation, maintenance) framework to plan, implement, and evaluate the effects of socially responsible initiatives. Originally, the RE-AIM framework provides a practical means of evaluating health interventions, mainly for assessing changing individual behaviors (King, Glasgow, & Leeman-Castillo, 2010). Despite RE-

Source: Developed by the author.

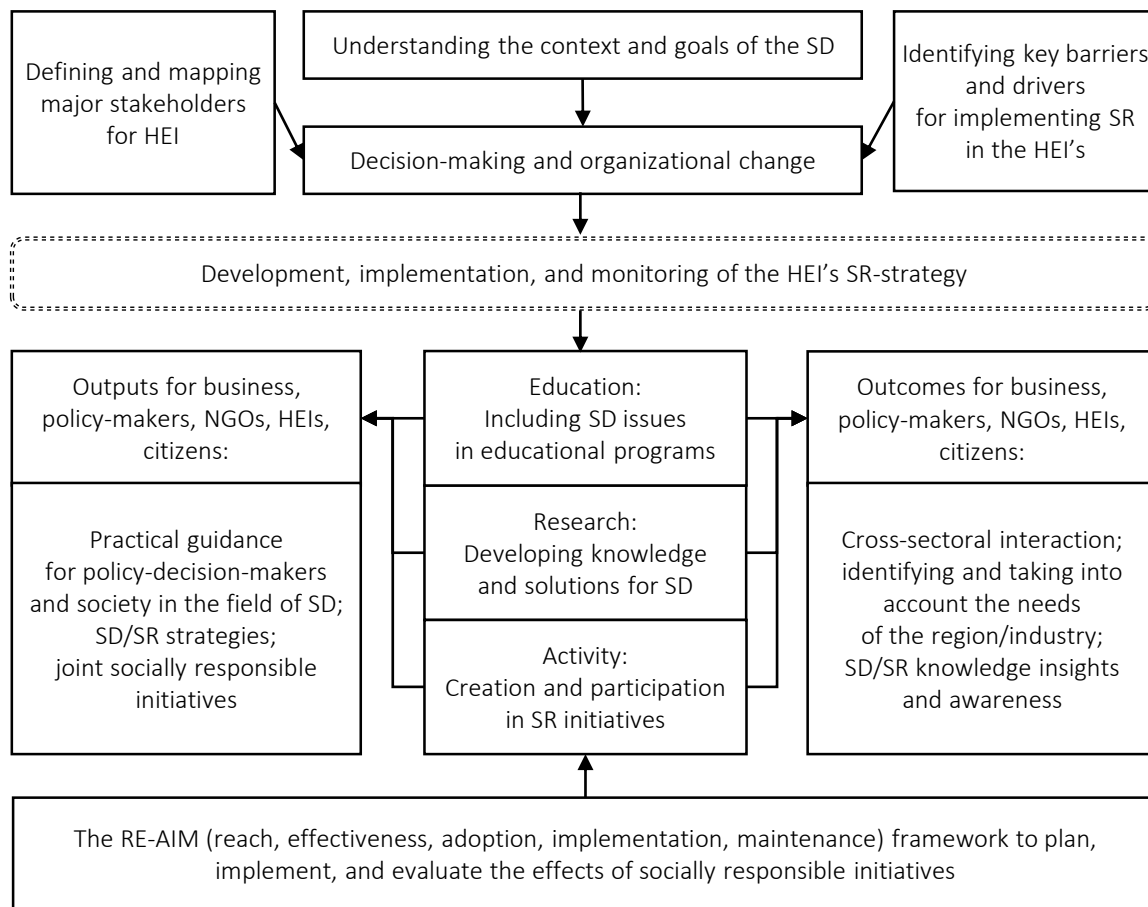


Figure 3. The mechanism of HEIs impact on SD through the implementation of SR concept

AIM's efficacy as public health planning and evaluation framework, it has not been applied to assessing the changes in the higher education area. Figure 3 the mechanism of HEIs impact on sustainable development through the implementation of the social responsibility concept.

Thus, the use of SR concept enables HEIs to take an active part in the life of the region and the country, namely identify the needs, engage the stakeholders, facilitate the interaction, disseminate the good practices, and develop the sustainable development strategies.

The effectiveness of HEI's SR strategy implementation depends on key criteria: understanding the needs and expectations of stakeholders (the main tools are focus groups, crowdsourcing, polls using traditional channels and social media, stakeholder mapping), understanding the needs and expectations of the external environment (the main tools are PESTLE analysis, benchmarking, risk assessment), understanding internal performance and capabilities (the main tools are the balanced scorecard, SWOT analysis, McKinsey 7-S), reviewing and updating the strategies, and communicating the strategies (the main tools are non-financial and integrated reporting, informational reporting in traditional media and social media, etc.).

4. DISCUSSION

In addition to the teaching and research mission, HEIs also carry out an important mission – to adhere to the principles of social responsibility and to disseminate this activity in the society. The results of the study indicate that an understanding of the importance of SR of HEIs has emerged in the society. It is established that there are only slight differences between the perception of SR in Poland and Ukraine, and the trends identified are common to both countries. However, if the Polish HEIs actively apply the concept of social responsibility and implement many different social ini-

tiatives, then the Ukrainian HEIs, mostly, only declare their readiness to implement SR concept. Therefore, the SR concept of HEIs can be the basis for enhancing the positive impact of HEIs on sustainable development, provided that the systematic and purposeful activities of Ukrainian HEIs implement the concept and promote its results in society.

The results of the empirical studies indicate both a sufficiently high level of influence of Polish HEIs on sustainable development and the possibility of increasing such influence in the future. This is why HEIs need to be aware of the importance and potential of a positive impact on regional development, as well as the need to communicate with the environment through various reports, present the information for world rankings, and more. Also, since all stakeholders are interested in the ethical and responsible activities of HEIs, it is necessary to disseminate the information about the main tools of HEIs influence on regional development, the peculiarities of implementing HEIs social responsibility practices, and the possibility of different stakeholders participation. At the same time, it is necessary to take into account the activity of specific HEIs and the needs of its stakeholders, because HEIs are different in the number of students,

scientific potential, financial capacities, interaction activity both at regional and international levels. Therefore, each HEIs has to choose its path and tools for its implementation.

The results of the survey showed the barriers to implementing SR concept of HEIs, including lack of time/motivation of teachers/staff to change, financial costs, and lack of interest of local community/government. To minimize the negative impact of these barriers, it is worth using international benchmarks in the field of SR of HEIs. Thanks to international and cross-sector partnerships, higher education can offer solutions to the biggest problems of society. Therefore, SR should be embedded in the mission, values, strategy, and daily activities of HEIs, which will increase awareness of the need to involve people in solving societal problems and the need for HEIs to contribute to sustainable development. As a result of the implementation of an effective SR strategy, graduates as future managers and employees in various sectors of the economy will be able to apply SR principles in the activities of their firms and organizations. In the future, SR of HEIs and ongoing sustainable development activities can help in selecting the best HEIs for training, work, and funding.

CONCLUSION

The results of the study show that the best indicator of the Sustainable Development Goals is the achievement of SDG 4, namely 94.4 for Poland and 92.6 for Ukraine (higher than the average for 162 countries by 24.4% and 27.2%). The positive fact is that HEIs understand that their SR helps to make a positive impact on SD. The concept of SR is quite well-known in the academic environment. Thus, 16% of respondents in Poland and 7.1% in Ukraine consider themselves experts in this field. The paper argues that HEIs have a wide range of tools to promote SD. These tools should be divided into three groups, namely 1) including SD issues in educational programs; 2) developing knowledge and solutions for SD; 3) creation and participation in SR initiatives. The proposed mechanism of the impact of HEIs on SD through the implementation of the concept of SR will allow HEIs to take an active part in the life of the region and the country, namely identify the needs, engage the stakeholders, facilitate the interaction, disseminate the effective practices, and develop SD strategies. As a result, it will promote the development of the country and regions on an environmentally friendly basis.

ACKNOWLEDGMENT

Comments from the Editor and anonymous referees have been gratefully acknowledged.

AUTHOR CONTRIBUTIONS:

Conceptualization: Inna Khovrak
Data curation: Inna Khovrak
Formal analysis: Inna Khovrak
Investigation: Inna Khovrak
Methodology: Inna Khovrak
Project administration: Inna Khovrak
Validation: Inna Khovrak
Visualization: Inna Khovrak
Writing – original draft: Inna Khovrak
Writing – review & editing: Inna Khovrak

REFERENCES

1. Bandalaria, M. P. (2018). Open and Distance eLearning in Asia: Country Initiatives and Instructional Cooperation for the Transformation of Higher education in the Region. *Journal of Learning for Development*, 5(2), 116-132. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1185879.pdf>
2. De Ketele, J. M. (2009). The social relevance of higher education. In *Global University Network for Innovation. In Higher education at a time of transformation: New dynamics for social responsibility*. Basingstoke: GUNI/Palgrave Macmillan. Retrieved from <https://catalog.princeton.edu/catalog/6022480>
3. Deklaracja społecznej odpowiedzialności uczelni. (2017). Retrieved from https://uni.wroc.pl/wp-content/uploads/2017/11/Deklaracja-Spolecznej-Odpowiedzialnosci_Uczelni.pdf
4. Dzwairo, B., Nombela, N., & Perumal, M. (2017). Sustainable leadership pre- and within the 21st century. *Environmental Economics*, 8(1), 75-82. [https://doi.org/10.21511/ee.08\(1\).2017.08](https://doi.org/10.21511/ee.08(1).2017.08)
5. Filho, W. L., Raath, S., Lazzarini, B., Vargas, V. R., de Souza, L., Anholon, R., Quelhas, O. L. G., Haddad, R., Klavins, M., & Orlovic, V. L. (2018). The role of transformation in learning and education for sustainability. *Journal of Cleaner Production*, 199, 286-295. <https://doi.org/10.1016/j.jclepro.2018.07.017>
6. Govender, I. (2016). Towards inclusive education for environmental sustainability at a University of Technology. *Environmental Economics*, 7(4), 78-84. [https://doi.org/10.21511/ee.07\(4\).2016.08](https://doi.org/10.21511/ee.07(4).2016.08)
7. Grosseck, G., Tiru, L., & Bran, R. (2019). Education for Sustainable Development: Evolution and Perspectives: A Bibliometric Review of Research, 1992–2018. *Sustainability*, 11(21), 6136. <https://doi.org/10.3390/su11216136>
8. Hardin, R., Bhargava, A., Bothner, C., Browne, K., Kusano, S., Golrokhian, A., Wright, M., Zeng, P. Z., & Agrawal, A. (2016). Towards a revolution in sustainability education: Vision, architecture, and assessment in a case-based approach. *World Development Perspectives*, 1, 58-63. <https://doi.org/10.1016/j.wdp.2016.05.006>
9. Herrera, A. (2009). Social responsibility of universities. In *Global University Network for Innovation. In Higher education at a time of transformation: New dynamics for social responsibility*. Basingstoke: GUNI/Palgrave Macmillan.
10. Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable Development: mapping different approaches. *Sustainable Development*, 13(1), 38-52. <https://doi.org/10.1002/sd.244>
11. Khovrak, I. (2019a). Doświadczenia społecznej odpowiedzialności międzynarodowych ośrodków akademickich. In *Społeczna odpowiedzialność: znaczenie dla uczelni i sposoby wdrażania* (pp. 41-43). (In Polish). Retrieved from http://odpowiedzialnybiznes.pl/wp-content/uploads/2019/09/SOU_publicacja.pdf
12. Khovrak, I. (2019b). The Impact of Universities on Sustainable Regional Development: Ukrainian Context. *The Ideology and Politics Journal*, 2, 147-166. (In Ukrainian). Retrieved from https://ideopol.org/wp-content/uploads/2019/12/___ENG.%201.8.%20Khovrak%20%20FIN.pdf
13. King, D. K., Glasgow, R. E., & Leeman-Castillo, B. (2010). Reaiming RE-AIM: Using the Model to Plan, Implement, and Evaluate the Effects of Environmental Change Approaches to Enhancing Population Health. *American Journal of Public Health*, 100(11), 2076-2084. <https://doi.org/10.2105/AJPH.2009.190959>
14. Kvasničková Stanislavská, L., Kvasnička, R., Kuralová, K., & Margarisová, K. (2014). Social Responsibility of Higher Educational Institutions – the Comparison of the View of Students and Potential Students. *Journal on Efficiency and Responsibility in Education and Science*, 7(3-4), 95-99. <https://doi.org/10.7160/eriesj.2014.070308>
15. Lucia, U., & Grisolia, G. (2019). Exergy inefficiency: An indicator for sustainable development

- analysis. *Energy Reports*, 5, 62-69. <https://doi.org/10.1016/j.egy.2018.12.001>
16. Michelsen, G., & Wells, P. J. (Eds). (2017). *A Decade of Progress on Education for Sustainable Development Reflections from the UNESCO Chairs Programme* (133 p.). Paris: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000252319>
 17. Pirmana, V., Alisjahbana, A., Hoekstra, R., & Tukker, A. (2019). Implementation Barriers for a System of Environmental-Economic Accounting in Developing Countries and Its Implications for Monitoring Sustainable Development Goals. *Sustainability*, 11(22), 6417. <https://doi.org/10.3390/su11226417>
 18. Ramos-Monge, E. L., Llinàs-Audet, X., & Barrena-Martínez, J. (2019). Drivers and Barriers of University Social Responsibility: Integration into Strategic Plans. In *World Review of Entrepreneurship, Management and Sustainable Development*. Retrieved from <http://hdl.handle.net/2117/114981>
 19. Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., & Fuller, G. (2019). *Sustainable Development Report 2019*. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). Retrieved from https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf
 20. Sharma, D., & Sharma, R. (2019). A Review Literature on University Social Responsibility Initiatives in the Global Context. *Journal of Emerging Technologies and Innovative Research*, 6(6), 27-35. Retrieved from <http://www.jetir.org/papers/JETIRCT06007.pdf>
 21. Trynchuk, V., Khovrak, I., Dankiewicz, R., Ostrowska-Dankiewicz, A., & Chushak-Holoborodko, A. (2019). The role of universities in disseminating the social responsibility practices of insurance companies. *Problems and Perspectives in Management*, 17(2), 449-461. [http://dx.doi.org/10.21511/ppm.17\(2\).2019.35](http://dx.doi.org/10.21511/ppm.17(2).2019.35)
 22. Vasilescu, R., Barna, C., Epure, M., & Baicu, C. (2010). Developing university social responsibility: A model for the challenges of the new civil society. *Procedia-Social and Behavioral Sciences*, 2(2), 4177-4182. <https://doi.org/10.1016/j.sbspro.2010.03.660>
 23. Wróbel, M. (2019). Katalog dobrych praktyk SOU. In *Spoleczna odpowiedzialność: znaczenie dla uczelni i sposoby wdrażania* (pp. 56-116). (In Polish). Retrieved from http://odpowiedzialnybiznes.pl/wp-content/uploads/2019/09/SOU_publikacja.pdf