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**“Mapping the Sustainable Development Goals (SDGs) in Athens
University of Economics and Business: SDG 7: Affordable and Clean
Energy and SDG 13: Climate Action”**

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Abstract

Within the general framework of the “Initiative for the adoption of the 17 Sustainable Development Goals (SDGs) from the Greek Universities”, this thesis aims to chart the activities of the Athens University of Economics and Business concerning Sustainable Development Goals 7: Affordable and Clean Energy and 13: Climate Action. It draws upon the framework outlined in 'Getting started with the SDGs in universities: A guide for universities, higher education institutions, and the academic sector' provided by SDSN Australia/Pacific. This guide serves as a research framework for identifying and categorizing university activities related to sustainable development, facilitating the adoption of more SDG-oriented actions by universities. After dividing AUEB's core functions in four pillars, we evaluate each one utilizing both qualitative and quantitative data from desktop assessment and keyword searches. The results vary from pillar to pillar but the general conclusion of the thesis is that AUEB has incorporated SDG 7 and SDG 13 more or less in all of its functions but considering their importance there is still a long way to go. Main suggestions for improvement are interdisciplinary approach with collaboration between departments and further alignment of decision making criteria with the SDGs.

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1. Introduction

1.1. What are the Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs from now on), are the centerpiece of the UN's 2030 Agenda for Sustainable Development, adopted in 2015 by all UN Member States as a commitment towards a better present and future for our planet and its people. The 2030 Agenda was the result of decades of efforts starting from the Earth Summit in Rio de Janeiro in 1992 while the SDGs concept are an evolved version of the Millennium Development Goals set by the Millennium Declaration (Millennium Summit, UN, 2000) to reduce poverty. SDGs take this concept many steps down the road by tackling not only major global issues such as poverty, hunger or peace but also climate change, equality and environment with the ultimate goal of sustainability.

In detail, the 17 SDGs are:

1. No poverty
2. Zero hunger
3. Good health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reduced inequalities
11. Sustainable cities and communities
12. Responsible consumption and production
13. Climate action
14. Life below water
15. Life on land
16. Peace, justice and strong institutions
17. Partnerships for the goals

It is obvious that they cover a wide range of issues, which gets even wider by the specific targets under each goal. Each target has indicators that help measure the score of a country, a region or the world in total in each goal. These scores

show the regional and global progress and are analyzed in the annual SDG Report.

Thus SDGs are essential tools for monitoring progress in crucial aspects of life and in the same time discover the strengths and weaknesses of each country or region.

Greece, which is the country of interest for this paper, has endorsed the implementation of the SDGs, integrated them in its strategy in most sectors and monitors said implementation by reviews and national indicators. Despite all that though the results are not very encouraging. Challenges remain on every SDG with 8 of them being significant and 4 major. Nevertheless on 5 of the SDGs it is on track to achieve the target and on 9 more improving moderately.

Here we will focus on two SDGs: 7 (Affordable and clean energy) and 13 (Climate action)

1.2. SDG 7: Affordable and Clean Energy

SDG 7 is about ensuring access to affordable, reliable, sustainable and modern energy for all. It is clear from the title that this is a multifaceted goal. It initially includes solving the serious problem of access to electricity for a large proportion of people who lack it, which makes it difficult for them to live normally and to fulfill basic needs such as food, housing and development. The goal also refers to the evolution of energy production methods in order to abandon technologies that are largely responsible for climate change (among others 60% of greenhouse gases are emitted from energy production) and replace them with sustainable, environmentally friendly and more efficient ones. We can see the above in more detail in the goal's targets:

7.1. The goal of universal access to affordable, reliable and modern energy services becomes more specific by setting a time limit (2030, a milestone year for SDGs).

Indicators for this target are: (7.1.1) Proportion of population with access to electricity and (7.1.2) Proportion of population with primary reliance on clean fuels and technology.

7.2. This target emphasizes the role of renewable energy sources as a clean form of energy production and the importance of increasing their share in the energy mix without, however, giving a specific percentage-target as something like this is obviously difficult.

Indicator: Renewable energy share in the total final energy consumption.

7.3. Energy efficiency means use of less energy in order to perform the same task or produce the same result. Here the target is to double the global rate of energy efficiency's improvement.

Indicator: Energy intensity measured in terms of primary energy and GDP

7.a. This one is pretty straightforward: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean

energy technology. Key point here is the need for international cooperation due to the global nature of the matter at hand.

Indicator: International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems

7.b. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing states, and land-locked developing countries, in accordance with their respective programs of support. Special notice can be made to the responsibility of developed countries to help the others secure the above services, taking into consideration that those have the biggest energy access problem as well as the most outdated production methods.

Indicator: Installed renewable energy-generating capacity in developing countries (in watts per capita)

According to UN's 2022 SDG Report there has been progress in this field but important challenges remain. For example around 700 million people are still living without electricity and more than 2.4 billion people cooking with inefficient and polluting systems. Renewable energy consumption and energy efficiency are increasing but still not fast enough to reach the goal and recent developments like the war in Ukraine have mixed results with some countries responding to the energy crisis by increasing the renewable share in their mix while others turn to fossils, making steps back from the green transition.

Greece has reached the targets of access to electricity and clean cooking technologies for all, but faces significant challenges when it comes to CO₂ emissions and renewables share in the energy mix without even the trend in these aspects being encouraging, especially with the latest events (COVID, energy crisis)

1.3. SDG 13: Climate Action

SDG 13 has the subtitle “Take urgent action to combat climate change and its impacts”. The key word here is urgent as it reflects the seriousness of the situation, which we can all feel in our everyday lives and makes this goal one of the most important. Climate change doesn’t only affect economies, but the very present and future of life on earth. Human activity has caused global warming with obvious results like rise of median temperature and sea level. It should be noted that some are more vulnerable to these changes than others.

Need for urgent action means need for international initiatives towards a coordinated transition to clean, sustainable economies. The recommended targets of this goal are:

13.1. Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. This is a defensive measure to ensure the protection of all from the problems that have already been created and their consequences cannot be avoided

Indicators are: (13.1.1) Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population, (13.1.2) Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030 and (13.1.3) Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies.

13.2. Integrate climate change measures into national policies, strategies and planning. It is essential to establish the mentality that the main criterion for every decision must be whether it helps action against climate change or not.

Indicators for this target: (13.2.1) Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change and (13.2.2) Total greenhouse gas emissions per year.

13.3. Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning. Before policies, it is significant that the problem is universally and

unanimously acknowledged. Even today it is still considered by many as a non-important or even “fake” issue, which affects the willingness to act and that is what the target aims to tackle.

Indicator: Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

13.a. Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible. Here we have a specific mention of the developing countries’ commitment to annually fund the developing countries transition efforts and the need for immediate activation of the Green Climate Fund, a fund established within the framework of the United Nations Framework Convention on Climate Change as an operating entity of the Financial Mechanism to assist developing countries in adaptation and mitigation practices to counter climate change.

Indicator: Amounts provided and mobilized in United States dollars per year in relation to the continued existing collective mobilization goal of the \$100 billion commitment through to 2025

13.b. Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities. This target is similar to 13.3. with a special focus on developing countries and especially their more vulnerable members. It is once more given emphasis on the importance of raising awareness and capacity for action.

Indicator: Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

As we can see in UN Secretary-General's latest SDG Report, things are looking gleam. Climate-related hazards and natural disasters like heat waves and floods are increasing affecting billions of people annually. Global energy-related CO₂ emissions rose by a record 6 per cent in 2021 and is on a track of raising to 14 per cent over the current decade, based on the latest national commitments and the war in Ukraine is causing further complications especially in Europe.

Greece's scores are currently alarming in this goal's indicators (except CO₂ emissions embodied in fossil fuel exports), with a trend for achieving a couple of targets in the future if the announced policies are implied.

In order to achieve these goals it is critical to involve universities. They can provide research and guidelines for the SDGs implementation. Current students will be the ones that can change the course towards a sustainable world if it is a key component of their studies. With a large audience and the ability to impact a variety of fields, universities can become the perfect examples of sustainable institutions. It is not a one way street though, as universities can also benefit greatly from the SDGs. Becoming sustainable and aware will add to an institution's profile, thus attracting students and potential partnerships while on the same time demonstrating their impact. On a more practical level, most of the new funding streams demand a level of commitment to the SDGs (for example the new EU Taxonomy).

1.4. Preview

The main goal of this paper is to find out the level of engagement of Athens University of Economics and Business in the SDGs mentioned above (7 and 13) using the tools and methods that are being used globally for the same purpose. We will divide it in 4 subsectors and evaluate each one separately. The results will be the core and hopefully at the end we will have some useful conclusions about its contribution

2. Methodology

This paper is part of the initiative for the adoption of the 17 SDGs by Greek universities. More specifically, as mentioned earlier, we will focus on the Athens University of Economics and Business (AUEB) and SDGs 7 and 13. The integration process, according to the SDSN guide (<https://apo.org.au/sites/default/files/resource-files/2017-08/apo-nid105606.pdf>), consists of the following steps:



Source: Kestin, T., van den Belt, M., Denby, L., Ross, K., Thwaites, J., & Hawkes, M. (2017). Getting started with the SDGs in universities: A guide for universities, higher education institutions, and the academic sector.

We will focus on step 1: "Map what you are already doing," within the framework of AUEB and concerning the SDGs of interest to us.

Initially, we clarify what we will examine in order to conduct our assessment. At this point, it helps us to categorize the university's activities into four main pillars. According to the SDSN guide mentioned above there are 4 core functions of university activity:

- Education
- Research
- Operations and Governance
- External Leadership

Education

Important pillar for raising awareness and familiarizing students with the SDGs. Education is the basic mean of providing tools for SDG implementation as well as training for relevant business fields. It can help to create a generation of students with the necessary knowledge, skills and desire to achieve these goals. Especially in developing countries, education's importance is even bigger, as the way to ensure there are new scientists and professionals able to tackle existing problems and face future challenges.

Research

The main way to enhance our knowledge about implementing and further developing the SDGs is research, which mostly happens in universities, so we can easily understand the importance of their role in this matter. Research amplifies innovation especially for a currently developing subject like sustainability and in the environment of a university it is easier to achieve it through an interdisciplinary approach. Additionally, it can be a basis for the implementation of practices and their subsequent development in developing countries.

Operations & Governance

It is crucial to examine the extent that the university's way of operating is complying to the sustainable development goals. In order to secure convergence , SDG targets can be integrated in university's operation and governance policies.

External Leadership

The University should be an example of SDG implementation, lead the way when it comes to developing policies and push other stakeholders to act the same through dialogue and initiatives. We have to check if it does and how committed it is to that role.

In order to measure performance in each pillar, we will use different methods.

For the research sector, the preferred method will be keyword searches. This involves entering keywords relevant to our SDGs in combination with other parameters into a database to extract the necessary data and then process it.

For the other pillars, the research method will mainly be desktop assessment, meaning a manual search of data through various sources, followed by their processing, grouping, and any other necessary steps for drawing conclusions.

In each section, there will be a more detailed description of the process followed before presenting the results, while at the end, the conclusions drawn will be provided.

2.1. Education

In this pillar the goal was to examine how much are the SDGs and especially those we are focused on, included in the universities courses. The first step was to study the program guide of every department (undergraduate and postgraduate) in order to write down the courses that are related to our SDGs. A few courses were easily identified from their title but for the majority I studied their contents, summaries and key points as presented by each professor. The number of related courses as a percentage of the total courses of each department was our score and from that we got the following table (1):

DEPARTMENT	TOTAL COURSES	RELEVANT COURSES	SCORE
Statistics	145	1	0,69%
Informatics	135	0	0,00%
Marketing and Communication	80	2	2,50%
Accounting and Finance	134	2	1,49%
Management Science and Technology	111	1	0,90%
Business Administration	237	8	3,38%
International and European Economic Studies	104	11	10,58%
Economics	141	3	2,13%
Total	1087	28	2,58%

Table 1: Relevant Courses per Department

From this table we can extract several interesting results.

- a) We see that there is a department with zero relevant courses (Informatics), as well as two departments (Statistics, Management Science and Technology) with only one (score < 1%). Those department's programs are built around computer science and thus have a technology-oriented core, which probably affects their scores.
- b) Going up we find Marketing & Communication, Accounting & Finance and Department of Economics with a score between 1,5 – 2,5 % (2-3 relevant courses each), which is still low but worth mentioning.
- c) Business Administration Department has a significantly larger number of relevant courses (8) but this doesn't translate in a big score (3,38%) due to its total number of courses (highest with 237).
- d) The clear outlier amongst department is International and European Economic Studies with the only double-digit score (10,58%), as 11 of a total 104 courses are directly or indirectly connected to the SDGs we are interested in.

Special reference must be made at this point to the Postgraduate program Law and Economics in Energy Markets, which not only includes the most relevant courses of all the programs but also sets the promotion of SDG 7 as one of its targets. To achieve that goal, it creates specialized experts fully informed on the SDGs and related subjects.

Next, I considered useful to divide the total courses and those relevant to our SDGs into Undergraduate and Postgraduate Studies. The result was the following table:

	TOTAL COURSES	RELEVANT COURSES	SCORE
Undergraduate Studies	469	6	1,28%
Postgraduate Studies	618	22	3,56%
Total	1087	28	2,58%

Table 2: Relevant courses in Undergraduate and Postgraduate levels

The main point this table makes is that SDG relevant postgraduate courses' percentage is more than double than the undergraduate one.

With a closer look, by studying the courses' guides and contents we see that besides the sheer numbers, postgraduate courses that incorporate sustainable development and especially clean energy and climate action have also much more specific references which is probably natural to happen due to their higher level.

Undergraduate courses are as expected of a more introductory and general nature, with two of them though mentioning SDGs in their course contents which is a promising sign for the attention given to the goals.

In total we can observe the University's score of 2,58%, with 28 relevant courses out of a total of 1087, a number that helps us understand the general performance of the institution when it comes to the pillar of Education.

2.2. Research

As we mentioned in the introduction, research may be the greatest tool for achieving the Sustainable Development Goals. In order to quantify the relevance of our university's research regarding SDG 7 and SDG 13 we used OpenAIRE, a Non-Profit Partnership of 50 organizations, established in 2018, to ensure a permanent open scholarly communication infrastructure to support European research. By entering the parameters we are interested in, we get the corresponding results. In this case there were two groups of searches.

The first one had as Constants:

- Organization: Athens University of Economics and Business
- Term: Energy
- Filters: Research Products

And as the Variant:

- Year

That way we were able to find all the research products related to SDG 7 for every year until results stopped coming back (due to lack of documentation). Results were then tested (at the level of summary) in order to avoid counting irrelevant ones.

We can see them below:

Organization:	AUEB
Term:	Energy
Filters:	Research Products
Variant:	Year

Year	Results
-------------	----------------

2023	0
2022	0
2021	5
2020	10
2019	12
2018	11
2017	20
2016	8
2015	10
2014	20
2013	10
2012	11
2011	5
2010	0
2009	7
2008	3
2007	0
2006	4
2005	5
2004	1
2003	0
2002	1
2001	0
2000	1

	1999	1
	1998	1
	1997	1
	-1996	0
		5,25

Table 3: Search results for SDG 7

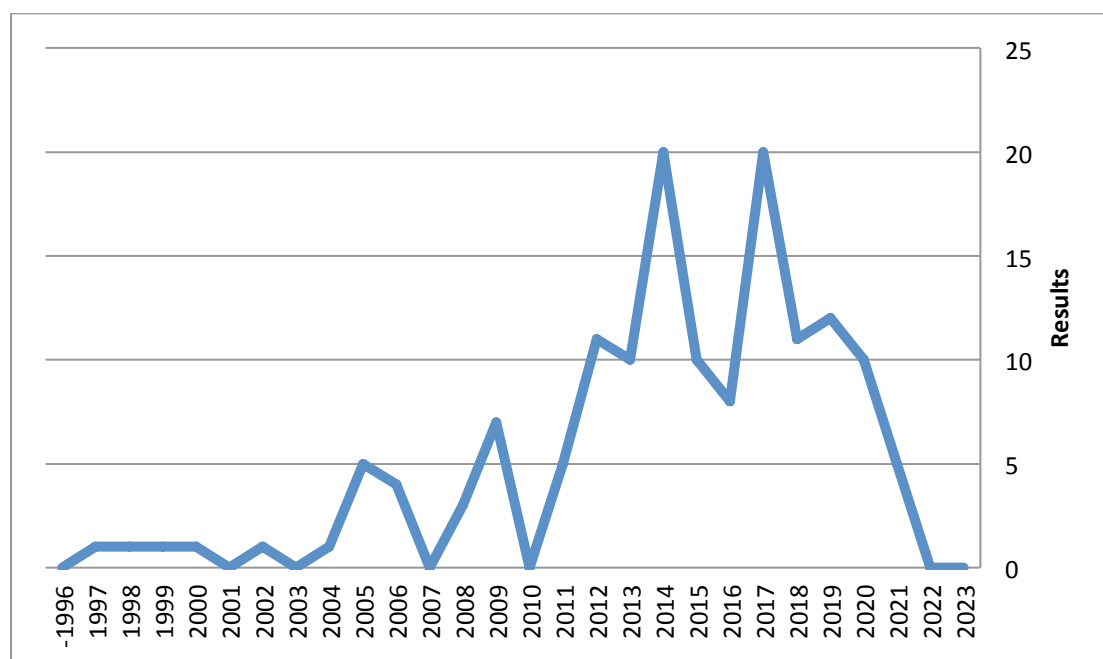


Chart 1 : SDG 7 results per year

Key Takeaways:

- Results appeared first time in 1997 and it isn't until 2005 that we have more than 1 (5).
- In 2012 we have the first double-digit number of results (11) and for the next decade they remain at the same level, with the exceptions of 2014 and 2017 when we get our larger number (20).
- In 2021 we observe a fall that can be attributed to special conditions (covid).

- Data for 2022 and 2023 should not be taken into account due to recency as our research was conducted in the spring of 2023.
- Average research products per year were 5,25.

For the second group of searches the key term Energy was replaced with Climate, so with the same procedure of two-level filtering we got the research products related to SDG 13 per year.

We can see the results:

Organization:	AUEB
Term:	Climate
Filters:	Research Products
Variant:	Year

Year	Results
2023	0
2022	0
2021	2
2020	5
2019	5
2018	5
2017	3
2016	3
2015	7

2014	6
2013	3
2012	5
2011	2
2010	2
2009	6
2008	1
2007	4
2006	2
-2005	0
3,210526316	

Table 4: Search results for SDG 13

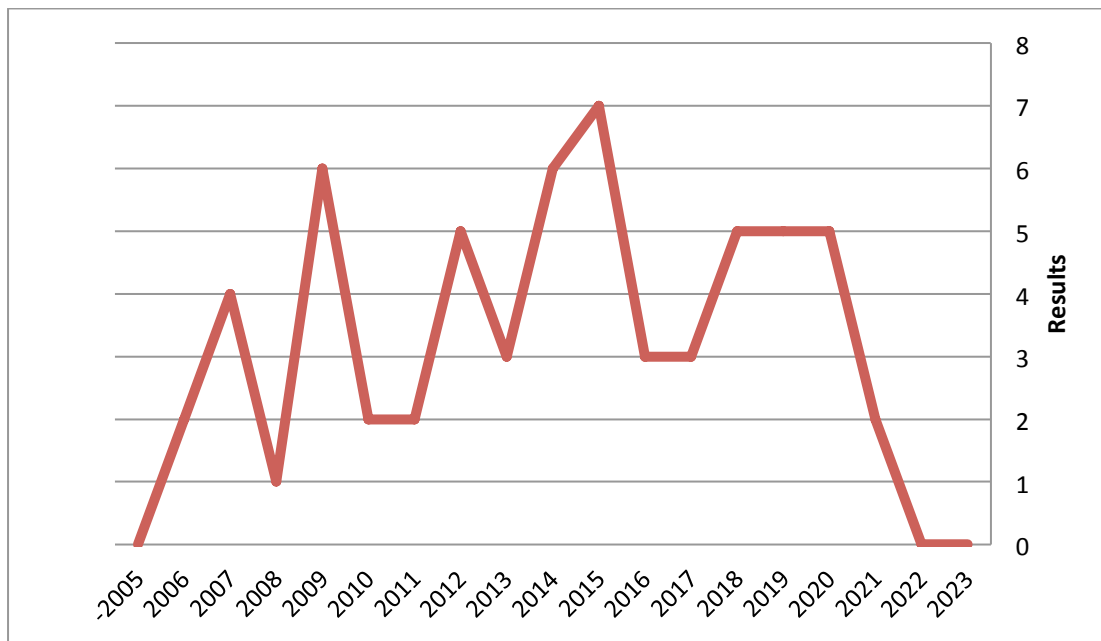


Chart 2: SDG 13 results per year

Key Takeaways:

- Research products appear a decade later than in the first group (2006).
- Largest number of results is in 2015 (7).
- Data are more evenly distributed through the years and there is no year with zero results.
- Again data for 2022 and 2023 should not be taken into account due to recency as our research was conducted in the spring of 2023.
- Average research products per year were 3,21. Results for Climate appeared not only later but are significantly less in total.

2.3. Operations & Governance

In order to evaluate the performance in this pillar I used my personal experience as both undergraduate and postgraduate student, as well as the University's official sources. On the recently renewed website for AUEB's social impact I found every action considering each SDG. Focusing on those that interest this study, main axis is the Strategy for the Environment and Climate Change that is being implemented since June 2008 and includes the following actions:

- Introduction of Natural Gas for the heating system: The transition of the heating system of the University from oil to natural gas has been completed. In addition to operating costs, it has significant environmental benefits due to its lower greenhouse gas emissions (GHGs), the most important of which is carbon dioxide (CO₂).
- Reduction of electricity consumption: The replacement of the old incandescent lamps with new lamps of low energy consumption category "A" in all the buildings has been completed. Pollutant emissions attributed to the use of our University lamps decreased by 68.26 tons of CO₂ or by 82%.
- Establishment of Recycling Centers: The implementation of recycling processes is a fundamental component of our environmental policy. At AUEB we have focused on the following recycling categories, in the context of which significant environmental benefits are obtained: a) recycling of toners and ink cartridges, b) recycling of light bulbs, c) recycling of paper, d) recycling of batteries and e) recycling of frying oil. The University collects data on recycling on an annual basis.
- Study for the application of green roofs in buildings: Green roofs are now a successful effort to create coolness and oxygen in big cities. A specialized design company evaluates the alternative scenarios, the possibilities and the static strengths of the buildings, etc.
- Air conditioning fleet maintenance program and replacement of old appliances and ventilation systems control.
- Integration of ecological criteria in the equipment markets: It is a requirement of the University for our suppliers to follow environmentally friendly procedures.

- Encourage the use of textbooks & online course support: Ecological awareness calls for the reduction of paper as a means of communication, where possible, and its replacement by electronic media. The Open eClass platform is already widely used in the AOC by the University Community, and a further systematic effort is being made to expand the use of new technologies for the benefit of students and the environment.
- Ensuring access to the University by people with disabilities: Studies are carried out on issues related to ease of access and traffic safety in the buildings, as well as the possibility of easy exit in case of emergency.
- Drafting of a Code of Environmental Ethics: It has been drafted by the Environmental Policy Committee, which is applied by the entire University Community.

Special mention should be made about eClass, an electronic “classroom” which Athens University of Economics and Business was one of the first in Greece to implement. It has replaced many procedures (including notes, tests and exercise sets) that were done in writing, contributing significantly to the saving of paper and other resources. Towards that goal is also the electronic execution of operational procedures instead of printing forms through each department’s website and electronic secretary offices.

The ReSEES (Research Centre for Sustainable Energy, Environmental and Economic Systems) plays a significant role in conducting research and education on topics related to Sustainable Management of Natural Resources and Energy. Essentially, it constitutes a part of the university dedicated almost exclusively to the issues we examine (our Sustainable Development Goals), further promoting research in these areas.

2.4. Outreach

Through the newsfeed, social media platforms, the events page, and the university's social impact documentation page, I identified the ways in which it communicates and promotes the goals of sustainable development. This occurs through the organization of conferences, seminars, and symposiums, as well as through more permanent solutions such as student clubs, SDSN (Sustainable Development Solutions Network), and ongoing collaborations with relevant stakeholders.

Some significant events were the following:

- In May 2023, on the occasion of Europe Day, the University organized the event: "Energy Transition - Climate Change." This all-day event was attended by officials from the EU and Greece, with a predominant participation from students of the Master of Science in Economics and Law in Energy Markets, who played a central role. Most topics related to energy transition and climate change were discussed through student presentations and interventions by professors and invited guests.
- In March 2023, the online event "Energy Communities in Greece" took place, a collaboration between the SDSN Youth Hub of AUEB (Athens University of Economics and Business) and ELSA Athens. The inspiration for the event was drawn from SDG 7: Clean Energy, while the discussion focused on energy communities and the role of universities. It involved professors and representatives from SDSN, ELSA, and NGOs such as Greenpeace.
- On November 30th to December 1st, 2022, the Master of Science in Economics and Law in Energy Markets provided its students with the opportunity to attend the 6th Sustainability Summit organized by The Economist in Athens. This was a unique opportunity for participants to hear about Sustainability issues and the latest news from leading scientists and professionals in the field.
- In November 2022, students of the Master of Science in Economics and Law in Energy Markets were invited to attend the scientific event "Energy and Geopolitical Challenges for the EU," organized by the Konrad-Adenauer-Stiftung (KAS) and the European Union of European Studies (EEES). Prominent scientists

discussed energy security and the assurance of energy resources in the EU, with direct and indirect references to the targets of SDG 7.

- In March 2019, the Master of Science in Economics and Law in Energy Markets organized the conference "Energy Markets, EU, and Greece: Achievements and Prospects" at the premises of the Athens University of Economics and Business (AUEB). Distinguished representatives from the realms of academia, businesses, and NGOs, under the guidance of department professors, formed three panels that discussed, under the observation of undergraduate and postgraduate students of AUEB and other universities, the following themes:

1. Energy Markets and Policy
2. Renewable Energy Sources and Sustainable Development
3. Energy Transition and Climate Change Adaptation

All three, but especially 2 and 3, essentially concern the Sustainable Development Goals 7 and 13

Moreover, the Master of Science in Economics and Law in Energy Markets has established a permanent collaboration with the Greek office of SDSN, participating in events and even organizing some. SDSN Greece is a network of individuals and organizations working together to promote sustainable development in Greece. They focus on addressing key challenges such as climate change, poverty, and inequality by implementing solutions at the local, national, and global levels. A notable example of this collaboration is the hosting of the Global Climate Hub alongside ATHENA Research Center and the Political Economy of Sustainable Development Lab. Through this hub, the aim is to conduct necessary research in order to generate substantial proposals for promoting sustainability including: (1) Existing technologies, (2) Circular economy, (3) Nature-based solutions, (4) Digitalization, (5) Innovation commercialization, (6) Sustainable finance and adaptation investment schemes, and (7) Policy reforms.

Another important point of reference is the development of collaboration between the University (through the Master of Science in Economics and Law in Energy Markets) and the EIT Climate KIC Greece, a branch of the European Institute of Innovation and Technology (EIT)

focused on climate innovation and entrepreneurship. It aims to promote and support innovation related to climate change, connecting these two concepts in response to the challenges posed by the current conditions and as referenced in Sustainable Development Goal 13.

Finally, through the university's International MBA program, two student clubs have been established with the aim of promoting the agenda we are examining.

The Energy and Sustainability Club constitutes the first energy club and aims to create:

- A knowledge platform between academia and companies regarding the modern research challenges in energy, environment and sustainable development sectors.
- A forum of discussion concerning the hotly debated energy and environmental topics of modern societies.
- A communication channel between different areas such as engineering, economics, public policy, environment, sustainable development where students, alumni, faculty and energy professionals can shape and share ideas concerning the upcoming new Energy Era.
- A cell of innovation inside university producing breakthrough ideas and collaborating with top AUEB laboratories.
- A strong relationship between AUEB society and alumni, energy companies, and policy makers.
- An international academic hub collaborating with other Energy Clubs from all over the world.

The Sustainable Development and Circular Economy Club is an interdisciplinary club with a focus on all aspects of Sustainable Development and Circular Economy through research and organization of events, as well as an active newsletter for informing interested parties.

3. Conclusions

To summarize our findings, let's first recap the findings of each pillar separately.

In the Education pillar, we observed a 2.58% relevancy score, meaning out of the total of 1087 courses, 28 were relevant. While this result is not insignificant, it certainly warrants improvement. Considering the importance of the goals that concerned us, it would be useful to include them in more programs as thematic areas, and departments with 0 or 1 relevant course should incorporate sustainability as a factor in more of their courses. Positive aspects include the more frequent reference in the postgraduate programs, particularly the Master of Science in Economics and Law in Energy Markets (LEEM) and the International MBA. A good step could be the creation of other similar MSc programs, as well as more relevant elective courses at the undergraduate level.

In the Research pillar, there was a distinction between goals 7 and 13. Papers related to SDG 7 began to appear 10 years earlier, albeit in small numbers initially, with a double-digit count in many years. The average of 5.25 per year is mainly due to the early years with low results, but it is still higher than the 3.21 of SDG 13. Climate change seems not to be a frequent topic of research and papers, although I believe that with the incorporation of more recent results this will change since both goals tackle issues currently of particular concern to the academic community worldwide, and AUEB cannot be an exception. Comparatively, it is easier to integrate the SDGs into Research; the university just needs to encourage their selection as a theme, with incentives for students and academics. It is also important to make efforts for interdisciplinary approaches through departmental collaboration for more effective and interesting research that can indeed contribute to achieving the individual targets.

The Operations and Government pillar is likely where the university performs best. It has already implemented sustainable practices for the past 15 years, such as reducing electricity consumption, using natural gas instead of heating oil, and recycling, while also advancing into new practices like green roofs. On top of that, more and more functions and activities are being digitized, while sustainability is a criterion for administrative decision-making. Initiatives like ReSEES reflect the

university's direction in this area, so I believe its “reflexes” work well in this regard. It is essential to maintain this level and make efforts for immediate adaptation to newer and stricter measures, integrate sustainable criteria into even more decisions, and encourage staff and students to adopt sustainable practices at least within the university's framework.

Data for the University's Outreach efforts were only available for recent years, as it is more challenging to find older information. From the collected data, there appears to be intense activity regarding both one-off events and more permanent actions/collaborations. Apart from the two clubs of the International MBA, all other initiatives and actions related to the SDGs we examined belong to the MSc LEEM program. On the one hand, this could imply that other programs and departments should start more related initiatives. On the other hand, it is crucial for this pillar that the University has such an active program. Possible moves to improve this area include increasing public statements through social media, organizing more related events, and attempting cross-sectorial initiatives that will involve more departments and therefore more fields.

Overall, the university seems to have integrated the philosophy of SDGs 7 and 13 into its processes, day-to-day operations, and external relations. However, at an academic level (courses and research), its performance does not seem to fully meet the urgency of these specific issues. There are positive signs, in my opinion, but greater emphasis should be placed on integrating these concepts and goals into more courses across more departments and promoting research around them, always combining the different fields in which both topics clearly extend. As mentioned above, the establishment, operation, and development of the MSc in Economics and Law in Energy Markets "boosts" the university's performance across all pillars and has the most significant contribution to the effort to harmonize with these goals.

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