CHEMICAL ENGINEERING TRANSACTIONS
VOL. 107, 2023
A publication of AIDIC
The Italian Association of Chemical Engineering
Online at www.cetjournal.it
Guest Editors: Petar S. Varbanov, Bohong Wang, Petro Kapustenko

ISBN 979-12-81206-07-6; **ISSN** 2283-9216
DOI: 10.3303/CET23107032

Central and Eastern European Examples of University. Institutional Aspects of Understanding Sustainability

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The scope of this paper is the interpretation of sustainability through the university as a traditionally recognized, value-based institution of knowledge, based on the example of Central and Eastern Europe, Hungary. Its aim is to interpret sustainability from different aspects, using the example of Central and Eastern Europe, including Hungary. For this purpose, the paper reviews the development policy directions of the past period and institutional realizations through public databases. The results of the research show that there are different dynamics and focus in terms of resources and development implementations. From the point of view of sustainability, it represents that the use of resources with different dynamics and focus is a challenge for the institutions.

1. Introduction

Given the fact that the European Union has set itself the goal of achieving carbon neutrality, the role of sustainability from various aspects is increasingly appearing among its development directions and priorities (CN, 2023). Thanks to the end of the period of EU development policy between 2014 and 2020, public databases now show the content of developments and the use of resources related to the topic. The cohesion policy of this period covers the regions of all Member States and its priorities include:

1. Strengthening research, technological development and innovation
2. Improving access, use, and quality of information and communication technologies
3. Enhancing the competitiveness of SMEs
4. Supporting the shift towards a low-carbon economy
5. Promoting climate change adaptation, risk prevention and management
6. Preserving and protecting the environment and promoting resource efficiency
7. Promoting sustainable transport and developing network infrastructures
8. Promoting sustainable and quality employment and supporting labor mobility
9. Promoting social inclusion, fighting poverty and discrimination
10. Investing in education, training, and lifelong learning
11. Improving the efficiency of public administration (EURaUD, 2014)

Sustainability plays a significant role in emerging markets (Ridley et al., 2011). It is important to mention that in connection with sustainable development, the role of the academy as a trainer also appears today, which influences and shapes attitudes on the human resources emitted, i.e., on the new players of the labor market. Various international studies have already dealt with the importance of role signals. Khalili et al. (2015), in their study, draw attention to the application of a methodology for leaders of higher education. In their opinion, academic programs can be developed to support sustainable development. Heleta and Bagus (2021) examine the Sustainable Development Goals (SDGs) in relation to higher education in low-income countries. According to the research, one of the priorities of the sustainable development goals should have been the building of local institutional and other capacities. This was only partially realized due to the neglect of higher education in low-income countries. Stein (2023) reviews emerging critiques of existing university sustainability efforts, such as

Paper Received: 10 April 2023; Revised: 09 June 2023; Accepted: 21 October 2023
Please cite this article as: Nagy G., Konczos-Szombathelyi M., András I., 2023, Central and Eastern European Examples of University. Institutional Aspects of Understanding Sustainability, Chemical Engineering Transactions, 107, 187-192 DOI:10.3303/CET23107032

critiques of greenwashing, climate colonialism, and (techno)solutionism. It offers a social map of three different approaches to sustainability: mainstream sustainability, critical sustainability and beyond sustainability. Ssekamatte (2023) reports on the research experiences of two East African universities in relation to climate change. It presents the role of the university, educational interventions, findings on institutional support. Shields et al. (2023) brings climate change into focus by examining higher education mobility. In his opinion, climate change is less considered in mobility support programs of non-European countries. Moliner et al. (2023) draw attention to their experiences in education in their study, which aims at collective development. Similar teaching methods and experiences may help deepen the relationship related to sustainability among university students in the future. Balázs et al. (2021) have already examined social responsibility and community engagement of a regional higher education institution in Hungary, where the issue of sustainability also appears.

Hungary joined the European Union in 2004. Following the coordination and regulation of development policy directions, "the development thematic areas identified under each national priority will also provide the basis for the thematic areas of the 2014-2020 development programs within the framework of the use of EU funds" (SSfHE, 2016). In Hungary, Act CCIV of 2011 on National Higher Education according to Article 15. paragraph thereof “training in a higher education institution shall be carried out on the basis of a training program” (AoNHE, 2011). “As part of the training program, the curriculum is freely prepared by the higher education institution in higher education vocational training, bachelor's and master's programs based on the training and output requirements issued by the Minister, and in joint training and specialized further training within the framework of programs financed by the European Union, the Visegrad Fund and the Central European Higher Education Exchange Program. Curricula shall be reviewed every five years. New or modified study and examination requirements may be introduced in an ascending system” (TaOR, 2022).

The study gives an overview of the calls for EU development funds available to higher education institutions in the period 2014-2020 in the field of sustainability. Examines appearance in Training and Output Requirements (TaOR, 2022). When reviewing public databases, different dynamics can be assumed in terms of resources and their development implementation. This study examines sustainability-related developments won by universities in Central and Eastern Europe, a Member State of the European Union, Hungary.

The goal of this paper is to interpret sustainability from different aspects, using the example of Central and Eastern Europe, including Hungary. The relevance of this topic came from the fact that nowadays, the topic of sustainability is gaining more and more importance and coming to the fore, which spills over into the university as a traditionally recognized, value-based institution of knowledge, and the topic is also accompanied by EU development frameworks. The justification for choosing a topic is also linked to the novel approach, which has not yet been studied from this point of view. The research gap is the analysis of the resource allocations of the European Union subsidies of higher education institutions from the perspective of sustainability.

The study sheds light on new aspects of sustainability in higher education. Another novelty is that it can encourage researchers interested in the broad, sustainability-related directions of higher education to create models.

2. Method

Following Hungary's accession to the European Union, it developed its tender system by coordinating development policies and strategies (Szabó 2020). Governance and organizational structure play a key role in this process (Kováts et al., 2017). Calls for funds will become available once development policies have been aligned. The justification of the choice of topic can be approached from several aspects. The already completed 2014-2020 European Union development period from Hungary provides opportunities for different analytical directions. The first part of the research will focus on an overview of the programming period. The development directions directly accessible from Hungary will be announced under the name Széchenyi 2020. Information on the closed period can be obtained via a publicly available database. In the course of the research, calls for proposals for higher education institutions will be collected.

Information on EU funds (Széchenyi 2020 calls for proposals, CfP) available from Hungary can be found on a public database (CfP, 2020). The focus period of the study is available as the Széchenyi 2020 (2014-2020) program, which is in line with the development directions of the European Union. During the analysis of the database, it was necessary to filter out those programs that were advertised exclusively for higher education institutions and whose main topic is sustainability. During the research, only data were analyzed where the higher education institution used the grant as a beneficiary.

After reviewing the general guidelines for the programs, it became apparent that sustainability-related calls for funding available to higher education institutions are concentrated within the framework of the Environmental and Energy Efficiency Operational Program (KEHOP):

- KEHOP-3.1.5-21 Raising awareness in the field of waste management and circular economy
- KEHOP-5.2.4-15 Energy efficiency investments of central budgetary bodies
- KEHOP-5.2.11-16 Development of photovoltaic systems for central budgetary bodies
- KEHOP-5.2.15-21 Preparation of energy developments of public buildings

Following the identification of the projects, higher education institutions were screened as beneficiaries in order to obtain quantifiable data. The resulting database included 30 higher education institutions with the identification and name of the call for proposals awarded, the location of the project, the title of the project, the date of award of the grant, and the amount of the grant awarded. During the analysis of the database, different dynamics and focus on resource uses can be assumed.

The second part of the research was the examination of sustainability in training and output requirements (TaOR, 2022). The document is available on the Ministry's website (TaOR, 2022), which contains the requirements applicable to higher education vocational training, bachelor's and master's programmes and religious training. It is important to underline that the analysis is based on the document applicable from the 2022/2023 academic years, because it is publicly available, but its transformation started in June 2015, when the Hungarian Rectors' Conference was asked to modify the content of the programs. During the process, a program committee was also established, whose members included delegates from the Ministry of Human Capacities, the Hungarian Accreditation Committee for Higher Education, and the National Conference of Student Union (SSfHE, 2016). On this basis, it can be concluded that the document currently publicly available already contains directives that are part of the coordination of development policies. During the JRC review, guidelines were defined for each area of training. During the research, the research focused on finding connections related to sustainability.

3. Results

Due to the method, the results are presented in two parts. The first section focuses on the results obtained from the analysis of data collected from the Széchenyi 2020 programming period. In the second part, in the document analysis, the results revealed in the JRC are presented.

3.1 Sustainability in the Széchenyi 2020 programming period – higher education aspect

Four of the Environment and Energy Efficiency Operational Program projects were available to higher education institutions.The call KEHOP-3.1.5-21 raising awareness in the field of waste management and circular economy the strengthening of environmentally conscious attitudes and ways of thinking in order to promote a sustainable lifestyle, production and consumption occupies a prominent place among its objectives (KEHOP-3.1.5, 2021).

The priority objective of the call KEHOP-5.2.4-15 energy efficiency investments of central budgetary bodies – in line with the domestic and EU strategy – its purpose is to encourage the implementation of energy efficiency developments and to promote the spread of decentralized, environmentally friendly energy sources. The call contributes to the implementation of investments aimed at improving the energy efficiency of buildings and increasing the use of renewable energy (KEHOP-5.2.4, 2015). The priority objective of the call KEHOP-5.2.11-16 Development of photovoltaic systems for central budgetary bodies is to encourage decentralized, building-related photovoltaic systems using environmentally friendly renewable energy sources spread, thereby supporting the fossil-based electricity of the central budget bodies the full or partial replacement of its use with a renewable energy source (KEHOP-5.2.11, 2016). The priority objective of the call KEHOP-5.2.15-21 Preparation of energy developments in public buildings – in line with the domestic and EU strategy – is to encourage it the implementation of energy efficiency developments and to promote decentralized, environmentally friendly renewable energy the spread of systems utilizing energy sources. The call contributes to improving the energy efficiency of buildings and renewable energy use for the implementation of investments aimed at increasing (KEHOP-5.2.15, 2021). The grants awarded to the 30 higher education institutions included in the database as beneficiaries were aggregated for the four calls for proposals.

It can be stated that the most funding amount was used for the call KEHOP-5.2.4-15 Energy efficiency investments of central budgetary bodies, as beneficiaries of two higher education institutions. A higher education institution received funding at the call KEHOP-3.1.5-21 Raising awareness in the field of waste management and circular economy. In the call KEHOP-5.2.11-16 Development of photovoltaic systems for central budgetary bodies, 16 higher education institutions received support.

In the call KEHOP-5.2.15-21 Preparation of energy developments of public buildings, 22 higher education institutions received funding (Table 1).

Table 1: Summary of Environmental and Energy Efficiency Operational Programs implemented by Hungarian higher education institutions

Contract notice identifier	Amount of aid granted (HUF)
KEHOP-3.1.5-21	999,999,115
KEHOP-5.2.11-16	2,706,880,658
KEHOP-5.2.15-21	3,559,114,616
KEHOP-5.2.4-15	9,220,284528

Given that most higher education institutions received funding under the call KEHOP-5.2.15-21 preparation of energy developments of public buildings, it is worth reviewing its distribution. Figure 1 illustrates the different extents of resources. The maximum amount of funding awarded in the call for proposals is nearly HUF 1,000,000,000. For a higher education institution, the amount of support is between HUF 500,000,000 and HUF 1,000,000,000. Support for 20 higher education institutions is below HUF 500,000,000, of which 15 higher education institutions receive grants below HUF 100,000,000 (KEHOP-5.2.15, 2021).

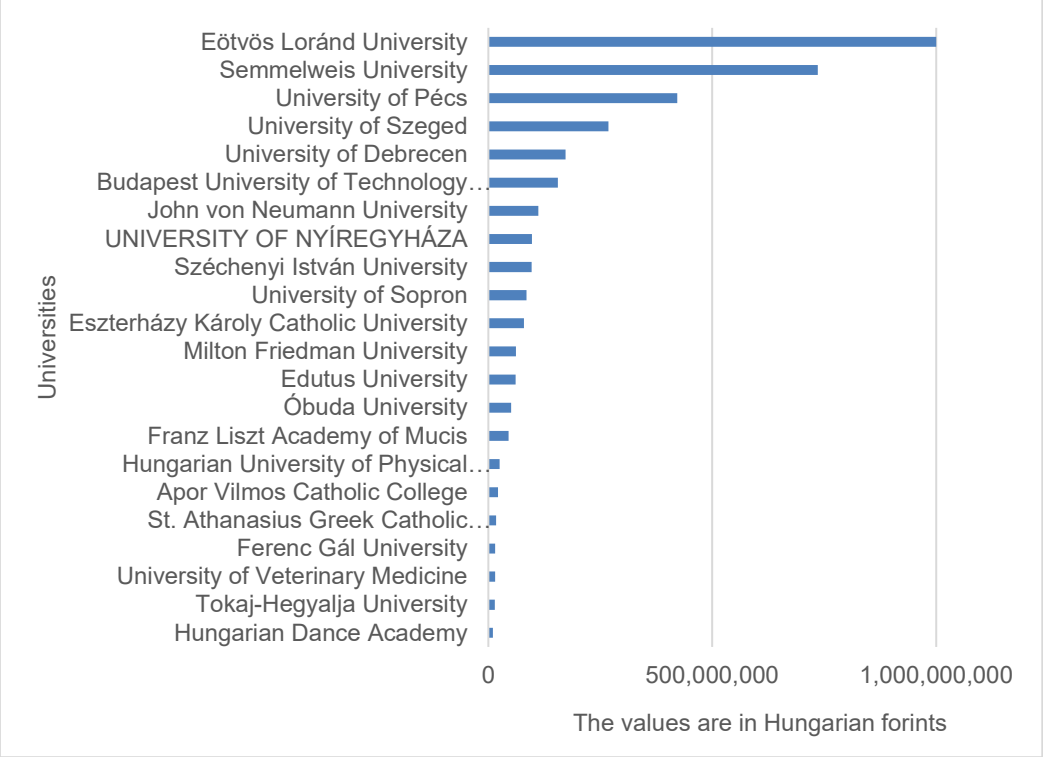

Figure 1: KEHOP-5.2.15-21 The amount of grants awarded to higher education institutions for the preparation of energetic improvements of public buildings in a call for tenders.

If we look at projects from the point of view of higher education institutions, we can illustrate this in Figure 2. It can be clearly seen that out of the 4 calls for proposals, most funds are concentrated in two higher education institutions, the other 28 higher education institutions received funding below HUF 2,000,000,000. One HEI received ranging from HUF 1,000 000,000 to HUF 2,000,000,000. Two higher education institutions received grants of HUF 500,000,000 and HUF 1,000,000,000. 12 higher education institutions received grants ranging from HUF 100,000,000 to HUF 500,000,000. Thirteen higher education institutions received grants below HUF 100,000,000 (CfP, 2020).

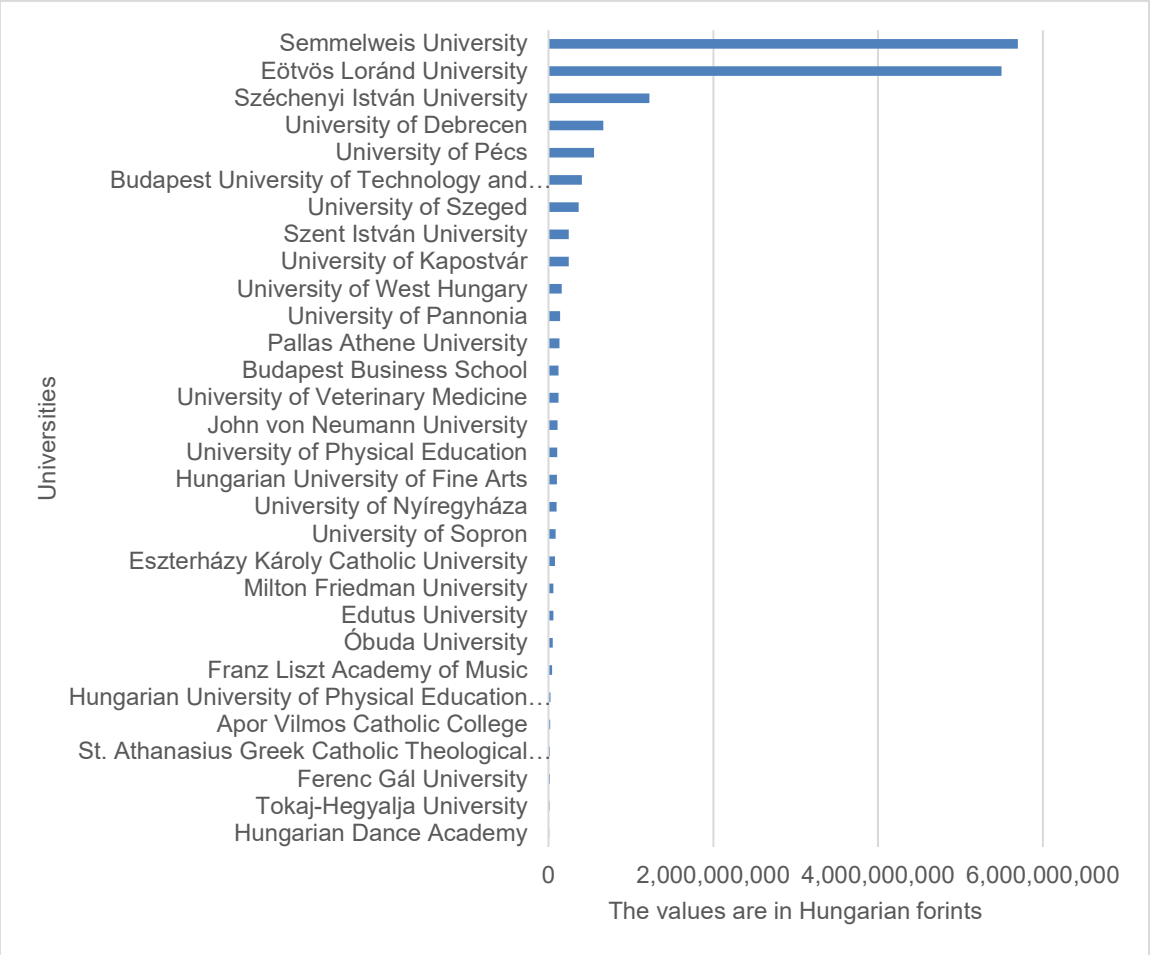

Figure 2: Amount of sustainability-related grants awarded to higher education institutions in the 4 calls for tenders

3.2 Higher education aspect of sustainability in the light of training and output requirements

With regard to the JRC overview, it is crucial to mention the structure of the document. It contains the applicable requirements for higher education vocational training, bachelor's and master's degrees, and religious training. In its structure, it also discusses and details the individual areas of training. In the 2410-page document, the word "sustainable" is used 252 times, and "sustainability" is used 141 times. In the first paragraph of Part 1, basic knowledge of sustainable development is already included as part of the professional competencies to be acquired during training. Reviewing the training and output requirements of bachelor and master programs, it can be concluded that 11 out of 12 training areas show a link to sustainability and sustainability. These are the fields of agriculture, humanities, social sciences, information technology, economics, engineering, medicine and health sciences, sports science, natural sciences, arts, and art mediation training areas. The only exception is the legal training area.

4. Conclusions

It is clear from the data presented in this work that sustainability is a key feature in the life of higher education institutions. It has been shown that there are different dynamics in the emergence of development funds between higher education institutions, and there are signs of such differences between institutions. The finding that sustainability appears in 11 of the 12 fields of education confirms that the academic sector and higher education policy are committed in this area. Given that, 30 higher education institutions have been included in the database, the examination of whether resource use with different dynamics and focus poses challenges for the institution will be part of the research in the future. The conclusion of the work is that this dynamic requires increased caution and presents unforeseen challenges during implementation.

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