

The Third Mission of Higher Education Institutes and Their Potential Impacts

Richárd Veres

Obuda University, Doctoral School of Innovation Management, Budapest, Hungary,
veres.richard@amk.uni-obuda.hu

Katalin Papp-Fésűs

Obuda University, Doctoral School of Innovation Management, Budapest, Hungary,
fesuskata@gmail.com

Abstract: The object of this study is to clarify the definition of the third mission of higher education institutes with presenting this type of actions, furthermore, describing their possible impacts simultaneously. The paper does not aim to provide a full literature review of third mission activities. It is an important task to provide an insight into the evolving of the examined topic as well as outlining development directions and best practises for the higher education institutes through the reviewed literature between 2020 and 2024. The literature review ensures the theoretical framework in which the third missions of the higher education institutes can be understood, and its scope of activities be known with finding its relevance.

Keywords: third mission, higher education institute, university, region

1 Introduction

With the evolution of the knowledge-based economy and society, the operation of higher education institutions (HEIs) are becoming more valuable through their knowledge generating and sharing activities. The HEIs are under more pressure from both the EU and the national levels of Europe to participate in the tackling of different global and local problems. The new roles of HEIs are to contribute to solving these challenges and removing the barriers by giving effective responses.

In Hungary, the law, CCIV. Act of 2011. 2. § (5a), governing the National Higher Education includes the information about the higher educational institute, which says “the HEI through its core activities such as spiritual values for community purposes and economic utilization contributes to the social and economic development of its region” [1]. The role of the economic and social improvement of the higher education

with this Act was declared at the highest level of the regulatory hierarchy. The related chapter of Research, Development and Innovation Strategy of Hungary (2021-2030) dealing with the use of knowledge and the strengthening of the third mission activities of the universities was written as a top priority which includes the activities and the impacts of the HEIs on their environments [2]. The Documentation highlights the following areas requiring strengthening in order to fulfil their third missions such as the social engagement, promoting science, disseminating knowledge, creating and implementing the institutional SDG strategy, as well as the role of the regional innovative ecosystems, enhancing the cooperation with non-academic partners. Among the emphasized objectives of “Neumann János Program” governmental innovation strategy, approved in the 2023, are the strengthening of the knowledge-based economy through the universities and their partner economic actors [3]. The domestic HEIs are on the right track to develop in this area, which is clearly an expectation from the leaders of the higher education sector. Furthermore, the social, the economical and the environmental embeddedness of HEIs basically determine which development path they take during the creation of their course portfolio, establishing the physical infrastructure, choosing the scientific areas of the researchers, as well as the designing the base of the competencies and services [4]. The range of the third mission activities can develop based on the determination with which all the employees of the organisation have the leading role with their own attitudes, engagements for the place, the community through their personal responsibilities for the region through their employment.

With this study, we would like to contribute to the understanding of the HEIs third missions, get to know the range of their activities in this field, mostly with a literary review, in order to find the key points.

2 Method

We used the Scopus database to review the literature between 2020 and 2024 and as a result of this searching with these keywords (higher education institution, third mission, knowledge transfer, innovation, entrepreneur). We identified 46 occurrences. We chose the ones from this database query which could help this study to reach its goals. Besides that, we conducted another query of the database of Hungarian scientific publications (MTMT) which helped me to get information about the characteristics of the regions’ role of the HEIs.

The literature review was divided into these bigger parts: dealing with the regions’ role of the HEIs, and processes from the embedded state of the region as well as European and Asian examples with international perspectives, touching on the science parks, living labs, start-ups, furthermore the social responsibility and the issue of societal innovation.

3 Literature Review

We didn't find a universal definition for the third mission of the HEIs but rather they can say there is no such a thing because every HEI operation is a different framework that's why a unique embeddedness describes these organisations. With a general approach, we can say "it's about a complex, multidisciplinary, improving phenomenon" in which the relationship of the HEIs and the actors of every other sector will be completed in a way that is related to the social and economic mission, and it can be interpreted as a contribution to these fields [5]. Having examined the definition, we should mention the education and the research as the core activities of the HEIs. It is easier to define the content of the third one compared to the previously stated activities, the implementation of which gets special attention nowadays. Although there is no universal definition, there are some reoccurring topics, which provide the central scope of the analysis.

3.1 About The Regional Role of Higher Education Institutes

Firstly, we examined the supporting role of the of the HEIs in the regional economy through the domestic literary review. Imre Lengyel mentioned the serious problem coming from the geospatial location of the HEIs, which doesn't support the reducing of the territorial inequalities or even widens them. The author cited the Concept of the National Improvement and Regional Development in which the concentration of HEIs in the capital was established with the aim of strengthening the organisations located in the less developed regions. In his study, he noted that there are no locally based institutions in seven counties in Hungary, which can trigger a chain reaction such as reduction of the number of local students, shortages of professionals at the local economical actors, as well as the capabilities of the innovation and competitiveness. Thus, the regional supporting role of the economics of the HEIs couldn't be fulfilled [6]. Now we can find many examples which aim to strengthen the local higher education. We can mention, as a good example, the Training Centre and Research Site of Salgótarján (SKKK) which offers marketable degree to local students to facilitate the retaining power of their hometown with strengthening the local economy.

In the complex system of the sustainability, the authors draw attention to the importance of the fourth subsystem, for the innovation besides the classic pillars of the sustainability (economical – societal – environmental), however combined management is recommended during the regional developments [7]. The innovation should appear in the other subsystems to make the sustainability a reality by which process the societal marketing can have a key role [7]. The HEIs can participate in the social marketing as the third mission activities to provide the facts to as many people as possible in order to support the change of the paradigm and build a sustainable future through educational and awareness raising activities.

3.2 Relating To the Regional Embeddedness

The urban area, just as the city and its area, interpreted as one development region, was first mentioned in 2008 in one EU document along with functionality [8]. Since the determination was first used, the Functional Urban Area (FUA) have become one of the main tools of the development policy of the EU during the planning. When we want to define the FUA we can use the method of the EU-OECD: “The FUA consists of a city and its commuting zone and includes the economical and functional extent of the cities which is based on the daily movements of the people.” This definition was used for 33 OECD countries, as well as Columbia and the members of the EU [9].

The Hungarian urban areas mostly include the central towns of the counties, which function as a workforce catchment area and a hub of the region as well as the concentration point of the higher educational courses [6]. The efficient operation of the urban areas was reached with intermunicipal cooperations by harmonizing the developments and ensuring the size-optimal services in the functional urban areas [10].

As a result of the suburbanization effect of the urban area of Szekesfehervar's demographics trends and labour market shift, the smaller towns (changing level) have achieved social gain in the number of residents and construction of new houses, furthermore the personal income tax have changed as this fact was highlighted by the author [8]. In the planning process of the public services and the institutional framework of the core town, people can be counted on to move away to become the population of the functional urban area and most of these people commute to work.

The universities function as a trigger institutions of multiplier effects for the local economy in their operational areas, and not just an education venue, but they have an impact on the improvement of the region by paying attention to the needs of the local labour market by designing their portfolio of courses to keep the youth in their hometown with marketable degrees [6]. They contribute to the increased capability of the foreign investments of the town and to the emergence of new economic organizations, employment opportunities by reacting to the feedback as fast as they can and cooperating in the local initiatives for the development of the town. The economic incentive force of the higher education institutes can be seen on the regional level by creating workplaces as an employer, by their investments in their infrastructure, and the contribution level of getting to know the region and branding the area [4]. As a result of the research, which contributed to the increasing acknowledgement of the region's image, the authors drew attention to the value creating process of the higher education institutes and their stakeholders. The authors reached these results through examining the interacts of the three clusters: 1. knowledge transfer flow to the entrepreneurs; 2. co-creation and innovation within the HEIs; 3. third mission of the universities in the improvement of the entrepreneurial skills [11]. The authors investigated the third mission of the HEIs and the role of the creative and cultural sectors of the ecosystems which was based on the Quadruple Helix Model framework. In their study they found that the HEI plays a role in the

establishment of the ecosystem and as a builder of the capacity enhanced activities of working together which contributes to the creation of innovation and building the brand of the place [12].

3.3 International Examples of Good Practice Around Europe

In the United Kingdom data of 164 HEIs were analysed to find out how the organisations have fulfilled their third mission, furthermore whether they contribute to the development of the regions. The authors concluded that the additionality can be found in the support of the graduates, attracting foreign investments, promoting networking and in the R&D cooperations, but cannot be recognised in the support of SMEs and the process of the knowledge exchange [13]. Also in the UK, it was investigated how the changing learning role of the HEIs can affect the knowledge exchange activities and whether it influences the diversity or its strength. In their study the authors concluded that the HEIs need to meet that expectation, which says, on the one hand, they must contribute to the regional development along their third mission which can reshape the organisation's inner structure and operational order. On the other hand, they need to create a mission statement, which can be found credible by both external stakeholders and the internal employees, and it harmonises with represented values [14].

The needs of the fourth generation of the universities were brought up by the authors, based on the Oztel's idea, in which the teaming up with the relevant stakeholders appears in their operational social and economic space by aiming for sustainable growth [15]. In this model, actors operating in one region negotiate and cooperate in order to create values together for implementing a more sustainable future scenario.

Along the development of the theory of the third mission of the HEIs, the concept of the citizen university appeared next to the image of the entrepreneurial university, which first says to us that they disagreed with each other, since the first one is related to the entrepreneurial spirit, modernization, and focus on commercial utilization, while the second highlighted the social inclusion, where the institutions are the providers of the common goods and services. These two ideas were merged into a flexible and innovative way by the couple of authors in a hybrid form theory in which the focus is on the usage of the creative resources for the design of the new solutions [4].

While identifying the global trends with the enterprising universities that are integrated in the innovational ecosystem as supporters of different stakeholders with the image of the innovative HEI, the author highlighted the engagement of entrepreneurial approach in the third mission, the necessity of the lifelong learning and having an impact on society [16].

The German Educational and Research Ministry intended to motivate the society to take interactions, so they created the Innovative College program. The authors, within the program, established the "innovation saloon", which is one of the interactive and

dialogical approach aimed to urge civil society to take part in the third mission activities to solve societal challenges [17]. In this vision, the dialogical interpretation of knowledge transfer appeared which can be inserted into the innovation ecosystem of the HEIs. Also, another couple of German authors analysed activities of the third missions in order that they could create a framework for its definition. The results of their research showed that in the mission statements of the universities focus was placed on the economic issues, mostly concentrating on the technical knowledge transfer, social responsibility and the topic of upskill was not significant [18]. In Austria, under this collection of concepts of the third mission, the ongoing social innovations were processed in the HEIs. The authors, in the study aimed at getting to know the Austrian practices, found that the third mission activities of HEIs were divergent at that moment, but with the support of the senior leaders can be raised to a strategic and more visible level [19].

3.4 International Examples of Good Practice Around Asia

A couple of authors presented the kind of connections that are between the patterns of the knowledge exchange and the institutional types through an empiric example of the global city, Hong Kong [20]. In their study, they concluded that almost every state university of Hong Kong created their capabilities to support the implementation of the knowledge exchange process with non-academic actors.

In an Indonesian study, they researched how creating an entrepreneurial university model can be possible with this systematic approach (“direction of the future university”) while making sure that the development of the community is accelerated during the execution of the third mission activities. The authors highlighted that the HEIs need to participate more in the national development and the knowledge transfer for the acceleration of the economic growth in the community [21]. They came to the conclusion that the entrepreneurial university model might be a catalyst for starting new businesses and it can contribute to the boosting of economic growth and decreasing of the unemployment rate. The appearance of the entrepreneurial spirit and the education in the curriculums of the HEIs became an important precondition for innovation and technological improvement. Therefore, the path is clear via increasing the rates of the graduates to encourage implementation of further factors, for example: science and technology parks, patents etc.

From the perspective of the HEIs, the Indonesian researchers investigate how to create a Quadruple Helix Model within the actors through supporting innovations of sustainable, regional social-economic developments [22]. The authors of the study concluded that the implemented sustainable entrepreneurial culture simultaneously made the application of the entrepreneurial university model and the SDGs real within the academic sector for the activities of the management, the leadership, the community.

The authors concluded that the Quadruple Helix Model can possibly be divided into further Triple Helix Models with a combination including, on the one hand, the appearance of the university-industry-economic connection, on the other hand, the partnership of the university-governance-community.

3.5 Science Parks, Living Labs, Start-Ups

As part of the third mission of universities, the science and innovation parks became popular worldwide, as knowledge exchange, technology transfer, like the innovation creating processes as catalysing tools of the policy. While analysing the connection between science parks and the universities with systematic literary review approach, the research group [23] concluded that the development of the literature in this topic can be divided into three major parts: before 2000 is the creation of the STPs, between 2000-2010 the geographical extension of STPs, from 2011 the thematization of the STPs (open innovation, sustainability etc.) which is further developing together with the understanding of the innovation. The researchers noted the lack of endeavour to get the new information which can shed light on the operation of the innovation process and the role of the universities in this procedure, because they found that most of the literary reviews of the STPs concentrated on the analysis of the case studies of one-to-one science parks.

When the Quadruple Helix Model is used, we can apply the approach of the Living Labs during the innovation processes in which the focus is on the end-users [24]. A research group, reviewing the literature of the investigating of the possibilities and the barriers of the Living Labs of the HEIs, reached the result in their study that the Living Labs evolved into a more individual block with a bottom-up approach to solve social challenges [25]. The model of the Living Labs (LL) requires from the multi actors and diverse stakeholders close contact and building capacity, as well as the concentration on the inter- and trans- disciplinarity research methods.

While investigating the cooperation with the university and the start-ups in Germany, the authors concluded that the HEIs, to fulfil the third mission and in their support of their community, can provide financial aid to the start-ups with social aims for maintaining sustainability. Their research can motivate enterprises to cooperate with the HEIs beyond the activities of the incubation and acceleration [26].

3.6 Social Responsibility and Societal Innovation

The social responsibility (SR) appears in the third mission of HEIs which makes it possible to evaluate their legitimacy and accountability during the provision of excellent level of education and research. The authors highlighted [27] that there is a need for supporting political and organizational environment to make social responsibility become an applied mission in the practice of HEIs. They propose that not only should excellent teaching and research by the employees be acknowledged and rewarded but also the engagement for the social responsibility thus strengthening the internal legitimacy of the organisation and its societal safety for having a bigger social impact.

A research group stated in their study that the reacting social innovation for the societal problems can be built into the third mission of the universities [28]. They concluded that within the university younger lecturers launched the initiatives to tackle the external social challenges but also the historical, the societal and the organisational culture can be determined. They suggested to the political decisionmakers that they should develop organizational grants and incentives as a solution of the

acknowledgment of the implementing social innovative activities in the HEIs. Schuch also came to this conclusion in his study where he highlights the lack of systems of grants and incentives as well as the problems of the demand side and the lack of potential markets [29]. He pointed out that the social innovation supports the self-representation of the universities, as well as the spread of the social entrepreneurial spirit opens the gate to social innovations in higher education.

Discussions and Conclusions

This study made the definition clear by aiming to analyse and process the literature of the third missions of the HEIs published between 2020 and 2024. The research proved that to understand the third mission of HEIs the way is through presenting activities related to the concept while also simultaneously describing their possible impacts.

Based on the research, it can be concluded that every HEI has got their own embeddedness which influences the possibilities of the third mission activities, depending on the type of economical, civil and governmental organisations functioning within their operational area, furthermore what networking possibilities they can have as well as the how well-known they are by the local society. The higher educational institute can appear as a trigger of the multiplier effects for the economy of a town and its region through its activities, however without the institute a slow decline can be experienced instead of development [6]. The HEIs are dedicated to Lifelong Learning, along with the needs of the actors of the regional labour markets, they can also help the employees of the organisations renew their knowledge, as well as helping with the process of retraining thus contributing to the maintenance of the employment.

In the model of the entrepreneurial university, the entrepreneurial spirit can appear in the activities of HEIs to strengthen the local economy with supporting new business ventures, which complements the SDGs, also it makes the spread of sustainable, entrepreneurial culture possible. Implementing the science and innovation parks with the role of the HEIs can catalyse the processes of the knowledge exchange and the transfer of knowledge, as well as the cooperations to create innovations. Applying the Living Labs approach to monitoring and reflecting the needs of the local society by involving the civilians, the HEIs have the possibility to conduct research touching on several scientific disciplines in order to strengthen their social responsibility.

When the HEIs operate in the Quadruple Helix Model, it gives them the opportunity to react to the environmental or social problems in their functional area by launching the societal innovation processes.

Providing an insight into the evolution of the examined topic through the literature and describing the possible ways of the improvement for the Hungarian HEIs was an important task of this study.

Along the further research of the third mission activities of the HEIs in the near future in Hungary, the researchers are to learn not only about the activities or developing the

assessing criteria, but also they should focus on getting current information on the motivation and attitude of the employees of the organisation, furthermore they should strive for the understanding of the inner process of the organisation, which can help fulfil the endeavours of the organisations.

| # | Authors | Activities can be served as a good example |
|----|---|---|
| 1. | Resch & Fellner & Fahrenwald & Slepcevic-Zach & Knapp & Rameder, 2020 | The third mission activities of the HEIs are needed to rise to the strategic level and to be made visible for society. |
| 2. | Unger & Marsan & Meissner & Polt & Cervantes, 2020 | The Concepts of the „entrepreneurial university“ and the „citizen university“ can be mixed in a flexible way to develop creative new solutions. |
| 3. | Corazza & Saluto, 2021 | The cooperation of the HEIs operating in one region contribute to jointly creating value for a sustainable future of their district. |
| 4. | Novela & Syarief & Fahmi & Arkeman, 2021 | Applying the entrepreneurial university model to spreading the entrepreneurial spirit in the institution is the same as teaching business knowledge in the curriculum. |
| 5. | Jirapong & Cagarman & von Arnim, 2021 | Launching startups with a social mission by university financing. |
| 6. | Monteiro & Isusi-Fagoaga & Almeida & García-Aracil, 2021 | Developing the organisational system of the grants and the incentives for the community of the university to support their visions for implementing social innovations. |
| 7. | Schmidt S., Stadermann J., 2022 | Establishing the “innovational saloon” program to involve the members of civil society for tackling social challenges. |
| 8. | Tercanli & Jongbloed, 2022 | The Models of the “Living Labs” operating close to the HEIs can support the solution for the social challenges. |
| 9. | Rentocchini & Rizzo, 2023 | Summarizing the goals and activities of the third mission of the HEIs in a mission statement. |

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| 10 | Godonoga & Sporn, 2023 | The acknowledgement and grants of the commitment to social responsibility. |
| 11 | Astuty & Ikhsan & Aryanto, 2024 | The entrepreneurial culture based on sustainability simultaneously makes the application of the SDGs and the entrepreneurial university model possible. |

Table 1

Examples of best practice for supporting the third mission activities of the HEIs

Source: the table is based on the collection by the authors.

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