The bond between Higher Education Institutions and society: A scoping review protocol about knowledge transfer and valorisation to promote sustainable development

Aleixo, AM; Leal, S; Mano, M; Azeiteiro, U.

Review question / Objective: The research question of the present paper is: How have Higher education's institutions operationalised the transfer of knowledge to society in terms of research, development, and innovation (R&D&I), what are the determinants of this process, and how the HEI knowledge transfer to society contributes for the sustainability and UN SDG? To answer this research question, the following goals were outlined: (a) understand which determinants influence the HEIs knowledge transfer to society, (b) perceive how HEIs knowledge transfer for society could be operationalized in an effective way; and, (c) perceive how HEIs knowledge transfer for society support the implementation of sustainability and the UN SDGs.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 August 2022 and was last updated on 17 August 2022 (registration number INPLASY202280072).

INTRODUCTION

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**Background:** HEIs' third mission in responding to societal problems has grown over the years, through the transfer technology and innovation to industries and technologies (Yarime et al., 2012). Thus, the intellectual's property becomes the path to the increasing cooperation between HEIs and societal and organizations stakeholders. However, for Profirioiu and Brişcaniu (2021) there are several factors that influence the state in which the knowledge transfer from HEIs to society is, namely the lack of a properly planned action structure that integrates necessary human resources on both sides that can respond to this need. Thus, and in a vision of SD, we can see that this link has an increasing role in the context of a greater response to societal challenges and sustainability issues, particularly in terms of SDGs, which should deal with inter and transdisciplinary. For Yarime et al. (2012, p. 11), the experience and expertise of the private sector are a particularly crucial ingredient when implementing multi-stakeholder collaborations with the public sector aimed at triggering institutional reforms favoring innovation for sustainability.

**Rationale:** The analysis of the evidence will make it possible to identify the determinants of the transfer of knowledge between HEIs and society. And whether this knowledge transfer contributes to the development of the territory and achieve sustainability. The literature review suggests that the link between knowledge transfer to society and SD is still neither clear enough nor sufficiently studied (e.g., Compagnucci & Spigarelli, 2020). As established by results of Purcell et al. (2019) the partnerships within and with HEIs can accelerate delivery of the SDGs, enabling higher education to make a fuller contribution to SD. As noted by Jacobsen et al. (2020) lacks knowledge on how companies can practice SD. Therefore, there is an urgent need to know what determine knowledge transfer and partnerships between HEIs and companies, how this process can be operationalized and how can this contribute to sustainability and SDGs.

**METHODS**

**Strategy of data synthesis:** Two electronic databases (Scopus and Web of Science Core Collection) will be used to find the studies to be analysed for this scoping review. The starting point of this review will be to identify a list of key words that can answer the questions proposed by the research. In this sense the following key words are identified: • In Web of Science Core Collection - TOPIC ((“Knowledge transfer*”) OR (valorisation”) OR valorization and “higher education” OR Universit*) and “sustainable development” OR sustainability)). • In Scopus - ((“Knowledge transfer*”) OR (valorisation OR valorization AND “higher education” OR Universit*) AND “sustainable development” OR sustainability)). In both cases, only scientific articles published in scientific journals will be considered. In the first screening of the articles, the analysis will focus the titles, abstracts, and keywords of publication based on the available scientific evidence. After applying the inclusion/exclusion criteria, the full articles will be analyzed. To increase consistency among authors, two authors screened the same publications, discussed the results, and amended the screening and data extraction manual before beginning screening for this review. It is intended that the resolution of disagreements in the selection of studies and data extraction can be discussed with the reviewers.

**Eligibility criteria:** The focus of the analysis will only consider knowledge transfer resulting from research and development (R&D) collaboration between HEIs and enterprises and other entities from society. Only studies related to knowledge transfer are intended to be included. For example, it is not intended to select studies that focus only the internship programmes and other initiatives related to knowledge
management. Studies that simply describe R&D&I projects, articles that were not in English, and articles for which the full article could not be accessed were also excluded from this analysis. We required that the study met at least one of the following criteria (AND/OR): • The study describes the state/level of HEIs knowledge transfer for society; • The study describes the impacts on local development of HEIs knowledge transfer for society; • The study describes the influence of HEIs knowledge transfer for society to achieve SDGs or sustainability. Two of the four researchers independently examined the full texts to assess relevance and potential inclusion of criteria.

Source of evidence screening and selection: The scoping review followed the guidelines and structure of PRISMA-ScR (Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews) which include 22 items (Tricco et al., 2018). A data-charting form will be development by two of four authors to determine which variables to extract, and independently chartered the data, discusses the results and continuous updated in an interactive process.

Data management: The articles selected were considered according to the following: they refer to determinants of collaboration between HEIs and society for research, development, and innovation, as well as the level at which this collaboration is found. In addition, and to respond to the objective of the study, if the studies infer about the importance of collaboration for development at a transversal level and for the achievement of sustainability.

Reporting results / Analysis of the evidence: The analysis of the evidence will make it possible to identify the determinants of collaboration in the transfer of knowledge between HEIs and society. And if this collaboration has allowed the development of the territory and achieve sustainability.

Presentation of the results: A graphic will be presented with the temporal presentation of the considered/selected articles. Two tables will also be presented with the articles identifying the object of study, and an indication of the determinants, the state of the HEIs and the developments of knowledge transfer for local, regional and national development and toward sustainability. And a diagram that presents the evolution of research since the search of articles and their selection and exclusion.

Language restriction: Yes. The analysis was restricted only to articles written in English, this restriction arises because some articles, namely Russian, do not present translation in English which makes their analysis difficult.

Country(ies) involved: The scoping review is being conducted in Portugal and all authors involved are Portuguese.

Other relevant information: NA.

Keywords: sustainability; knowledge transfer; higher education institutions; scoping review.

Dissemination plans: It is intended to present the results of this study in a book chapter on “The Impact of HEIs on Regional Development: Facts and Practices of Collaborative Work with SMEs”, to be published by IGI Global.

Contributions of each author:
Author 1 - Ana Marta Aleixo - Author 1 drafted the manuscript.
Email: aaleixo@ucp.pt
Author 2 - Susana Leal - The author developed the selection criteria, the risk of bias assessment strategy, operationalized the screening of articles and review all the results. She reviewed the full manuscript.
Email: susana.leal@esg.ipsantarem.pt
Author 3 - Margarida Mano - The author read, provided feedback and approved the final manuscript.
Email: margarida.mano@ucp.pt
Author 4 - Ulisses Azeiteiro - The author read, provided feedback and approved the final manuscript.
Email: ulisses@ua.pt