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**Research Project: Sustainability competencies and graduates' employability:
Embedding the Sustainable Development Goals in the universities' curricula**

Introduction

In the last two decades we assisted to the increasing awareness of Higher Education Institutions (hereafter HEIs) of their key role in sustainable development (Figueiró & Raufflet, 2015). HEIs implemented initiatives integrating sustainability as core value such as sustainable education, campus initiatives also involving students, and research programs (Swain et al. 2014, Lozano et al., 2013, Emanuel & Adams, 2011). With respect to teaching activities, the introduction of sustainability issues in the curricula are aimed at providing students competences for interpreting current societal challenges such as climate change, pandemics, and water security (Lambrechts et al., 2013; Barth et al., 2007). Moreover, since the adoption of the UN Agenda 2030 in 2015 as general framework for planning actions to concretely achieve sustainable development, the 17 sustainable development goals (SDGs) are becoming a primary issue for both public and private institutions and for the society, HEIs included.

In the past decades it was unclear whether sustainability competences are fully appreciated by the job-market as the business domain had difficulties integrating sustainability as a core value in its strategies (Boxer, 2008). Today, we assist to the increasing demand for enterprises for socially and environmentally responsible behaviors (Haigh et al., 2015). The firms' need to integrate economic, social, and environmental dimensions of sustainability (the so-called triple bottom line) suggest the need of new sustainability-related competences (Banerjee, 2011). Also, driven by the UN to achieve peace and prosperity for people and the planet, the SDGs provides a common blueprint also for the business community which is called to do its bit. Accordingly, today, CEOs puts sustainable development as a priority, thus besides technical skill what is needed is "sustainability literacy" (Forbes, 2021).

Research objectives

In this research project we explore the relationship between master graduates' employability and their acquired competences on SDGs. Our goal is to assess the impact of SDGs-related curricula on the career of master graduate. The impact is measured by three variables (i) employment, (ii) absence of skills mismatch, (iii) higher salary. Specifically, our research questions are:

- 1) Does the participation in SDG-related courses may increase the employability of recent graduates? Do the SDG-related curricula increase the likelihood of finding employment given that they provide skills that are positively valued by employers?
- 2) Do the skills acquired participating in in SDG-related courses provides skills that positively impact on productivity, thus on salary? Sustainable development is a key prerogative for industries, thus,
- 3) Related to the point above, do the skills acquired participating in in SDG-related courses reduced the skill mismatch?

Data platform and contributions

The research project extends to the consortium universities the methodology developed by the University of Bologna to map the sustainability skills acquired by students (Paletta et al., 2019; Paletta, Bonoli, 2019). Based on this, it is possible to determine the number of exams taken; the educational credits acquired and other variables of the educational process that can be associated with each SDG for each student. We use the Italian Survey on the Employment Conditions of Graduates from the AlmaLaurea Interuniversity Consortium to estimate the probability of having a job and better employment.

The project aims to develop a new database by the consortium universities to integrate three different orders of variables: individual background variables (input), variables of the educational process (output), variables of employability (outcomes and impacts).

The political implications of the research project are relevant at different levels:

- 1) for university study program development policies, in a manner consistent with the sustainable development goals;
- 2) for students, families and other stakeholders in choosing university courses;
- 3) for political decision-makers in designing the system of incentives for sustainable development.

Publications relevant to the research project

Fia M., Ghasemzadeh K, Paletta A. *How higher education institutions walk their talk on the 2030 Agenda: a systematic literature review*. «HIGHER EDUCATION POLICY», 2022. *Online first*

Degli Antoni, G.; Fia, M.; Sacconi, L., *Specific investments, cognitive resources, and specialized nature of research production in academic institutions: why shared governance matters for performance*, «JOURNAL OF INSTITUTIONAL ECONOMICS», 2021, n.d., pp. 1 - 22

Facchini C.; Fia M., *Public Sector Reform in Italian Higher Education: The Governance Transformation of the Universities — A Comparison Among Perceptions of Rectors and Department Chairs*, «HIGHER EDUCATION POLICY», 2021, 34, pp. 560 - 581

Paletta A.; Bonoli A., *Governing the university in the perspective of the United Nations 2030 Agenda: The case of the University of Bologna*, «INTERNATIONAL JOURNAL OF SUSTAINABILITY IN HIGHER EDUCATION», 2019, 20, pp. 500 – 514

Paletta A.; Fava F.; Ubertini F.; Bastioli C.; Gregori G.; Camera F.L.; Douvan A.R., *Universities, industries and sustainable development: Outcomes of the 2017 G7 Environment Ministerial Meeting*, «SUSTAINABLE PRODUCTION AND CONSUMPTION», 2019, 19, pp. 1 – 10.