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Erasmus student mobility in STEM disciplines

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Recently, STEM disciplines - which stands for Science, Technology, Engineering, and Mathematics and encompasses a broad range of scientific fields - have been increasingly recognized for their influence on global economic well-being, particularly given the relevance of hot topics such as innovation, digitization, and the ecological transition, which are indirectly related to STEM fields. In this paper, to inspect the inclination and collaboration of the young generation towards STEM disciplines, we identify the most active countries and institutions in terms of STEM student mobility, taking into account the size of the entities. Data were collected from the European Union Open Portal, and a directed and weighted network of STEM student mobility was obtained. Network analytic methods such as hubs and authority algorithms were applied to reveal the structure of student STEM mobilities and identify the most important parts of the network. Special attention was given to gender differences as they are reported as one of the recurring themes that emerge when discussing STEM subjects. The results confirmed the dominance of male STEM students but also showed that this dominance varies widely across European regions, with major differences in the mobility of incoming and outgoing STEM students among Scandinavian and Mediterranean countries. Specific attention should be provided to try to increase the presence of women in STEM fields, including student mobility.

Keywords

student mobility, gender differences, STEM disciplines, network analysis

Topics

- Student mobility network

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