

# SCIENTIFIC EDUCATION AND INNOVATION: FROM TECHNICAL DIPLOMAS TO UNIVERSITY STEM DEGREES

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## **Abstract**

This paper studies the effects of university STEM education on innovation and labor market outcomes by exploiting a change in enrollment requirements in Italian STEM majors. University-level scientific education had two direct effects on the development of patents by students who had acquired a STEM degree. First, the policy changed the direction of their innovation. Second, it allowed these individuals to reach top positions within firms and be more involved in the innovation process. STEM degrees, however, also changed occupational sorting. Some higher-achieving individuals used STEM degrees to enter jobs that required university-level education, but did not focus on patenting. (JEL: I21, I25, I26, I28, J24, O30)

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