

Offshoring and U.S. Innovation Capacity

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Paper Abstract: The degree of offshoring has increased rapidly in past decades. Because of this trend, economists have been debating whether offshoring is reducing U.S. innovation. To shed light on this question, I used Compustat data and a model developed by Li and Hall (2016) to measure investment and capital stock in R&D and organizational capital for all key non-financial U.S. industries during the period of 1995 to 2011. Then, I used the world input-output database to calculate the annual value added per export ratio, a measure of an industry's degree of offshoring, for all key U.S. non-financial industries. Lastly, I used those estimates to examine how the increasing degree of offshoring impacts the U.S. innovation capacity.

The results show that: first, as the degree of offshoring increases, U.S. industry-level TFP increases as well. Second, as the degree of offshoring increases, most U.S. high-tech industries increase the intensity of their intangible assets. Industries with a higher degree of offshoring invest more in intangibles. Third, in addition to R&D assets, organizational capital contribute positively to an industry's TFP as well. And, both R&D assets and organizational capital are complementary in terms of the contribution to a firm's TFP. Fourth, although low cost import competition from China positively affects the innovation rates of OECD developed countries (Bloom et al., 2015), I find that for the U.S. R&D intensive manufacturing industries, the positive relationship comes from the South Korea and Taiwan but not from China. Last but not least, in the area of technology, U.S. industries, especially high-tech industries, have been increasingly invested more resources on organizational capital.