Technology Polarization

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Abstract

We construct a new method to describe how firms are located and have moved dynamically in technology fields using technological dissimilarity computed from patent citation overlaps among firms in the NBER US patent dataset. Our estimated firm distributions show increasing trends in technological distance and polarization on average, where polarization is measured by the extended version of Duclos, Esteban and Ray (2004) whose polarization measure indicates the degree of inter-group competition. The polarization in technological fields has negative correlation with quality-adjusted amount of patents. However, the impact of polarization becomes significantly positive when a technological field is immature.

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