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The Diffusion of Information Technology and the Increased Propensity of Teams to Transcend Institutional and National Borders
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Abstract:
This study examines the relationship between the diffusion of IT and changes in collaboration patterns across institutional and national borders. To undertake the research, the authors match an explicit measure of institutional IT adoption (domain names, e.g. www.umsl.edu) with institutional data on all published papers indexed by ISI for over 1,200 U.S. four-year colleges, universities and medical schools for the years 1991-2007. The publication data examined cover the social sciences and natural sciences and narrower fields such as economics and biology. Two measures of institutional collaboration are examined: (1) percent of papers produced by a U.S. institution with one or more co-authors at another U.S. institution (US-US); and (2) percent of papers produced by a U.S. institution with one or more non-U.S. coauthors (US-INTL). We first describe collaboration patterns across universities and then use regression analysis to examine the impact of IT exposure on multi-institution collaboration. IT exposure is measured by the number of years elapsed since an institution's adoption of a domain name. Results indicate dramatic growth in the percentage of both US-US and US-INTL collaborations, as well as important differences by field. The study provides modest evidence that length of IT exposure has had a positive and significant effect on both US-US and US-INTL collaborations.

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