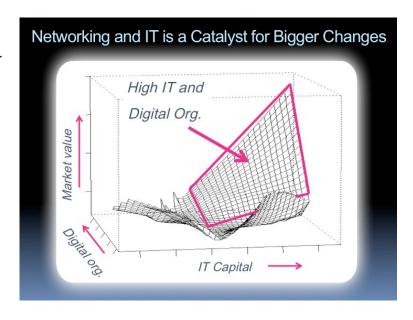
Two Decades of Game-Changing Breakthroughs in Networkin and Information Technology — Expanding Possibilities Ahea



http://cra.org/ccc/theimpactofnitrd

The Economic Impact of Information Technology Erik Brynjolfsson Massachusetts Institute of Technology

The exponential improvements in the power of digital technologies have been remarkably consistent for over 40 years, but the economic effects of these advances are much larger in recent years. Digitization has led to an acceleration in productivity growth in the U.S. economy overall, and particularly for the companies that use information technology most intensively. The most effective companies have reorganized the way they make decisions, interact with customers and suppliers, and innovate to take advantage of the digital revolution, creating trillions



of dollars of intangible organizational assets in the process. Furthermore, the increasing digitization of economic activities has made possible four important trends, each of which has significant implications for innovation:

- Improved real-time, fine-grained measurement of business activities;
- Faster and cheaper business experimentation;
- More widespread and easier sharing of observations and ideas; and
- The ability to replicate process and product innovations with greater speed and fidelity.

While the net effect of digitization has been to substantially boost productivity and create trillions of dollars of new wealth, not every firm or every person has benefitted equally. The gap between leading firms and laggards in most industries has grown. Meanwhile, income inequality has worsened. The challenge for individuals, companies and policymakers is to adapt their skills, organizations and institutions more quickly to keep up with ever-accelerating digital advances.



































