

7.2: The Productivity Paradox

In 1991, Erik Brynjolfsson wrote an article published in the Communications of the ACM entitled "[The Productivity Paradox of Information Technology: Review and Assessment](#)." Many businesses believe that increasing their investment in information technology will lead to higher worker productivity. However, after conducting a thorough review of studies on the effects of IT investment on productivity, Brynjolfsson discovered that IT's addition to businesses had not improved worker productivity. This phenomenon is known as the "productivity paradox." He concluded that this paradox resulted from our inability to demonstrate IT's contribution to productivity due to a lack of quantitative measures.

Definition: Productivity Paradox

The productivity paradox (also referred to as the Solow paradox) is the observation made in business process analysis that, as more investment is made in information technology, productivity may go down instead of up.

In 1998, Brynjolfsson and Lorin Hitt published a follow-up paper, "[Beyond the Productivity Paradox](#)." The paper used recently gathered data to confirm that IT can positively affect businesses. The authors discovered that the benefits of technology may not be immediately linked to increased productivity but rather to more intangible factors such as organizational structure. Additionally, the impact of IT can differ significantly between different companies.

7.2.1: Does IT matter?

Just as a consensus was forming about IT's value, the Internet stock market bubble burst; two years later, in 2003, Harvard professor Nicholas Carr wrote his provocative article "[IT Doesn't Matter](#)" in the Harvard Business Review. In this article, Carr asserts that as information technology becomes more ubiquitous, it becomes less of a differentiator to distinguish one business from another. Since information technology is readily available and the software is easily copied, businesses cannot rely on these tools to provide a **sustained** competitive advantage. IT becomes a commodity over time, much like a utility such as electricity, and should be managed as such, focusing on minimizing costs and risks. IT management should see themselves as a utility within the company and work to keep costs down while providing the best service with minimal disruptions. As you can imagine, this article caused quite an uproar, especially from IT companies. Many articles were written in defense of the strategic value of IT; many others agreed that Carr was onto something.

Carr followed it up with a book in 2008's "[The Big Switch: Rewiring the World, from Edison to Google](#)," to examine how the cloud is reshaping business, society, and culture. He draws a parallel between the impact of electricity and the transformative power of cloud computing.

The best thing to come out of the article and the subsequent book was that it opened up discussion on IT's place in a business strategy and what role IT could play in developing and sustaining competitive advantages. We want to address that question in the rest of this chapter.

7.2.2: References

Brynjolfsson, E. and Hitt, L. (1998). *Beyond the Productivity Paradox*. Communications of the ACM. Retrieved August 16, 2020, from <https://doi.org/10.1145/280324.280332>

Brynjolfsson, E. (1992). *The Productivity Paradox of Information Technology: Review and Assessment*. Center for Coordination Science MIT Sloan School of Management Cambridge, MA. Retrieved from August 16, 2020, from <http://ccs.mit.edu/papers/CCSWP130/ccswp130.html>

Carr, Nicholas G (2003) *IT Doesn't Matter*. Retrieved August 20, 2020 from <https://hbr.org/2003/05/it-doesnt-matter>

Carr, Nicholas G (2008) *The Big Switch: Rewriting the World, from Edison to Google*. Retrieved July 11, 2023, from https://www.nicholascarr.com/?page_id=21

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