Notes on


It has been said for a long time now: IT is an enabler of changed work practices and organisational solutions, and will not by itself something increase productivity or wealth. It follows that it should be at least equally important to mastermind changes in practices and organisation as it is to acquire suitable IT. Thomas Falk and I argued already in our 1996 book *IT som strategisk resurs* that balanced scorecards could be useful in orchestrating such changes, and in coordinating them with implementation of new information systems.

In their new book Brynjolfsson and Sauders summarize the evidence for IT’s role in the economy – cf. the book’s subtitle. It’s a slim volume, and it doesn’t say much new if you have followed the debate over the so-called IT productivity paradox in the nineties up to the more recent rise and fall of the new economy, and the current more chastened attitude to IT’s blessings. As a text, it is highly uneven: my guess is that MIT professor Brynjolfsson and Wharton School lecturer Saunders summarized the evidence, and that someone at the publisher then added down-to-earth examples to make it palatable for a more general readership. The result is a book where the level of argument varies substantially, from explanation of GDP to reference-filled discussions of complex statistical relationships. It was based on a grant from an American institute to devote a year to identifying the “main research results” in the areas of IT innovation and productivity, and it is useful to have this summarized in an accessible format. I will limit myself to the authors’ (B&S) main arguments.

B&S review the impact of US investments in IT on productivity growth. They conclude that there is a time lag of four or five years between these: the 2001-2003 surge in productivity was “the delayed effects of the huge investments in business processes that accompanied the large technology investments in the late 1990s” (p xi-xii). It is the combination of such practices that produces productivity improvements: “duplicating a competitor’s success requires replicating a portfolio of interconnecting practices. …This unique combination of a firm’s practices can be thought of as a kind of organizational capital” (p xii-xiii).

B&S provide a number of nice graphs of IT investment etc. One of these (p. 13) tracks profitability in IT-intense industries. The disparity between best and worse has “exploded” since the mid-nineties – “Using technology effectively matters more now than ever before” (p.10). B&S quote a graph published by Brynjolfsson back in 2000, showing the extensive spread in productivity growth for firms with similar IT investments. I interpret this as a lack of more recent equally broad work on this.

The conclusion, anyway, is that what you do with your IT is much more important than how much you have. They discuss how IT can be used both for centralization and decentralization, comparing with Coase’s (1937) rationale for firms and Leavitt and Whisler’s (1958) discussion of (then) future management practices. “Business practices that enhance productivity” are the subject of a chapter which mostly reiterates various publications by Brynjolfsson and Hitt in the early 2000s. They found that seven practices determine the outcome (p. 62ff):
1. Move from analog to digital processes
2. Open information access
3. Empower the employees
4. Use performance-based incentives
5. Invest in corporate culture
6. Recruit the right people

Thus, their views on how to utilize IT’s potential comes down strongly in favour of a more decentralized way of operating. These are, however, complementary practices: how you combine them seems more important than any separate practice. US firms seem better at them than UK ones.

The authors believe it worthwhile to measure organisational capital – a firm’s “stock of non-tradable intangible assets” (p. 77), and they “expect to see more work in this area in the coming years. Various researchers have estimated that the annual investment in these intangibles held by US businesses is at least $1 trillion” (p. iii-xiv). There are various ways of measuring: estimate spending; market values; analysts’ comparisons of earnings. To my mind, they say to little about when and how such metrics are to be used.

They also want more studies into consumer surplus, arguing from basic microeconomic theory that we all benefit enormously from almost-free IT services, and that this leads to major problems in comparing standards of living and for our general knowledge about our economy. We underestimate the role of service industries, as consumer surplus increases happen more in these than for manufactured goods. Eg, both consumers and firms benefit from Google searches and similar services, but free information is not counted as output. Consequently, labour productivity and general welfare are underestimated.

This leads B&S into a few short pages on pricing of information goods, bundling, information rights etc. Mentioning YouTube as an example of thousands of people contributing their innovations, they say “If history is any guide, the Internet will encourage vast amounts of innovation. The real questions are ‘Who will the winners be?’ and ‘What mechanisms will be used to compensate them?’” (p.106).

The book concludes with a number of research opportunities: more measuring of digital work; measuring of welfare effects; treating organizational capital as investment; providing incentives to invest in information goods and open source-type collaborations. This final idea builds on how reputation systems and decentralized votes can determine resource allocation (p.125).

As I said, a good summary but few really new ideas for those who have followed some of the debate. I find it easy to link B&S’s emphasis on metrics to the idea that scorecards and strategy maps are useful tools to guide the development of the organisational practices and investments in organisational capital that B&S claim are vital for positive effects from IT investments. For the individual organisation, I can’t see that dollar metrics of such capital that B&S advocate are really necessary – other types of information will be at least as helpful in guiding the development of “interconnecting practices” that they advocate.

I’m currently involved in a project on usable IT and strategy maps, and the book has added to my conviction that tools to guide the use of IT may be of equal importance to any inherent properties of the software itself. Such properties will of course be a necessary but not sufficient condition for success. But increasingly, as buyers differentiate their use (as B&S tell us they should), and software hopefully becomes more mature, it is the combinations with
how you invest in organisational capital, and how effectively you utilize your existing stock of such capital, that will determine your success!

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