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Compact and insightful, *Wired for Innovation* provides a synthesis of the research on econometric analyses of information and communication technologies (ICT) that bear on organizational and industrial productivity. The eight chapters are eminently readable, the ordering is sensical, the line of argumentation is clear, and the book’s thesis is topical. While I raise a concern and highlight a missed opportunity, these should not discourage you from reading this book. *Wired for Innovation* is a useful read for advanced undergraduates, graduate students in professional preparation programs, technical staff of policy-making units, and scholars who are not economists but want to know about related work in this area (and value summary pieces with excellent footnotes pointing to primary sources). I count myself in the latter category.

Economics is not a community defined by a singular voice. And, empirically-based analyses of the roles and effects of ICT are not at the intellectual center of modern economic scholarship. This noted, empirically-based insight into the roles and effects of ICT in our economy is both important and impactful. Erik Brynjolfsson and his students are key intellectual contributors to the body of knowledge in this area; this area of economics is garnering more attention from other scholars and policy-makers; and questions on the importance of ICT to productivity are certainly of more interest than they were even a decade ago. The body of literature summarized in *Wired for Innovation* communicates to interested non-economists a coherent and economically-based articulation of ICT’s effects on organizations and industry.

A distinguishing characteristic of this book is that economics, and econometric analyses, are made readable for non-economists. Careful and sustained footnoting provides pointers to the source materials, so the details of the analyses can be found (outside of the text) but are not presented in this book. In place of the detailed sets of assumptions, boundary condition specifications and formal models, the book provides textual descriptions. The tone is direct and authoritative, written by people who are clearly comfortable with the assumptions that underlie both economic thinking and econometric analyses. It is easy to read along with them. We are introduced in the first chapter to what economists mean by technology, innovation and productivity. We get a sense of the information age, and then move to how to measure its economy in chapter two. We read in chapters three through five about characterizing the contributions, practices and intangibles that define ICT in organizations. In chapters six and seven we get a quick review of the role and need for innovation in the economy, and a quick

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1 Particular thanks to Kristin Eschenfelder and James Howison for commenting on an earlier version of this review.
review of how consumer surplus is both a goal and a source of this innovation. The final chapter provides a look forward, something I comment on later in this review.

I value the insights from the collected work summarized here. Over the years I’ve read several of Brynjolfsson’s papers. Reflecting on my reading of the source papers viz. the summaries provided I am impressed by fidelity of the summary. And, the book provides the means to develop a more explicit linkage among papers of his, and others. This synthesis is very useful and one of the core reasons for my positive review.

For me, the strengths of the book center on the middle chapters, where the most empirical material is presented (and where the authors are closest to their research). For example, the discussion and evidence presented in Chapter 3, focusing on how firm-level IT investments serve as a platform for internal-to-the-firm innovation is compelling. Likewise the concept of complementarities and business practice innovation – the focus of Chapter 4 – is quite insightful. In Chapter 5, the authors argue that current accounting practices overlook crucial, but intangible, firm-level assets. Brynjolfsson and Saunders offer their own approach to rectifying this, building from some detailed analyses of their own.

Not being an economist, I am fascinated by their ability to frame complex issues that lie outside of their models as secondary concerns. For example, one claim -- repeated several times -- is ICT-based investments at the firm level take about four years to show up in productivity measures. Given the approach is based on time-series analysis of firm-level data, time has to be the dominant explanation. Who knew that investments in ICT are much like mixing a cake: add the ‘right’ ingredients and wait four years? The econometric analyses summarized here provide useful insights on effects, but not very useful insights on means to achieve them.

My concern is that readability comes at a price. The confident tone that helps make this book a compelling read also reflects the set of deeply, or dearly, held assumptions about the way the world works and how economic activity is organized and measured. There’s no discussion of alternative views and little discussion about these assumptions. Reading Wired for Innovation, had me constantly thinking of Trevor Pinch and Harry Collins (1998) essay on “Tidings of Comfort and Joy: Seven Wise Men and the Science of Economics,” from their Golem series. This essay focuses on the serial inability of the best economists of England to help guide their economy and live up to the goals they articulated (a more scientifically sound economic policy) and which Prime Minister Margaret Thatcher sought. Why I am reminded of this is likely because the tone and confidence of the seven chosen economist’s quarterly prognostications seem to be echoed in confidence regarding the insights offered through Wired for Innovation.

Perhaps because of this, and perhaps because econometric analyses is based on looking back to think forward, the last chapter is not as compelling as the first seven. Brynjolfsson and Saunders suggest that in the future we should strive to get more fine-grained data and focus more attention in particular on data about social networks. They suggest improving current econometrics models and advancing beyond the contemporary state of measures relative to consumer surplus, intangible assets, and incentives. The future is based on better measurement? I had hoped for some insight on innovation.
One of the tantalizing but un-developed parts of this book is its intimation of the intense debates among economic scholars. My own views on these debates are observational, not participative. I’ve read some economic history (and some of the work of Paul David is cited in Wired for Innovation), evolutionary economics (such as the work of Shane Greenstein and colleagues, who have also looked at the economic value of IT, but not in the same ways as reported here), institutional economics, and economic sociology (neither area is touched on in the current book; and, it may be that many economists might consider economic sociology to be separate from economics). Each of these intellectual communities offers different insights into economic activity, some contradictory. The point is that economics is a big disciplinary space filled with communities that hold deeply conflicted views on economic action, the means and ways to measure this, and the sets of allowable assumptions. The point in raising this is not to criticize the thinking or contributions of Brynjolfsson and Saunders, but to highlight that the debates in scholarly fields are important to understand because they often signal the unresolved issues.

It may be too much to ask of a summary book to also educate the educated reader (the target audience of this book) about some of these debates. I think not. Certainly these debates are intimated by the passing notes about contested views on how measure the information economy, intangible assets, and worker productivity (and by essays such as Butler, 2010 and Evans, 1997). One of the powerful contributions of the work (and the community behind it) reported on in Wired for Innovation is their ability to advance both conceptualizations of ICT for organizations and industry-level analyses combined with means (models and data) to represent these in measureable ways. A bit more insight on the intellectual edges would help students understand economics more as a science in action; other scholars would be more able to understand the issues being debated, and the book would likely be even more interesting because of this edginess.

Finally, I return to the underlying power of core assumptions. Economists have a very strong core of assumptions about individual rationality and economic behavior, the importance of markets, hierarchies, and networks; the nature and need for incentives; and the power of econometric analyses and – more broadly, economic models. Despite powerful differences in how some of these core assumptions are measured, this shared disciplinary affinity provides economists both a coherence and confidence which many other social and behavioral sciences lack. Coherence and confidence are a good basis for writing useful and readable books such as this.

Works cited:


