When people talk about the digital economy they are usually talking about the convergence of communications, computing, and information. However, Erik Brynjolfsson and Brian Kahin, the editors of *Understanding the Digital Economy: Data, Tools, and Research* (Cambridge, MA: MIT Press, 2000), have pulled together the work of experts in the field that go beyond those sectors. The essays they compiled focus instead on the transformation of business and commerce throughout the economy and the resulting social impacts of that change. The collective works seek to promote a better understanding of the growth and socioeconomic implications of IT and e-commerce, and promote increased private sector research to inform the related investment and policy decisions.

Four major perspectives are used to discuss the impact of e-business on the economy: the macroeconomic perspective; market structure, competition, and the role of small business; employment, workforce, and access; and organizational change. Each perspective is driven by an underlying question which presents challenges for researchers, policymakers, and managers interested in understanding issues related to electronic commerce. Table 1 organizes those leading questions following the framework developed by Kauffman and Walden (2001). (See Table 1.) This framework recognizes the different levels of aggregation of the economic activity involved, starting at the level of the technology, moving through products and processes, up to the level of firms and markets, and the macro economy as a whole.
The most aggregated level of analysis in the book considers the macroeconomic issues in electronic commerce. We are informed of the measurement and methodological problems that constitute drawbacks to understanding the scope and significance of transformations triggered by information technology. The authors’ discussion points out that inconsistent methodology, inadequate data collection activities, and inaccurate measurements of the true output versus productivity benefits are precluding the advance of our understanding of the drivers of the Digital Economy. For example, one of the underlying issues addressed at this level in the book is what has come to be known as the “productivity paradox”. However, it should not pass unnoticed that macro-level analysis most likely will not reveal the value created by computers (Brynjolfsson, 1998).

Regarding access and employment, the essays elaborate on the growing concern that the benefits of the Digital Economy are not evenly distributed among different groups in society. The two major concerns are the role of technologically-sophisticated workers in the Digital Economy and the equity of the benefits-sharing as digitization of information changes the structure of businesses and industries. For example, the dramatic expansion of inequality and educational differentials, and disparities in access among different groups seem to follow the perfect labor market scenario explored by Beck (1999). In this scenario, the most qualified workers receive much of the benefits, but both firms and poorly-qualified workers tend to lose out (Kauffman and Walden, 2001).

Regarding market structure and competition, Michael D. Smith, Joseph Bailey, and Erik Brynjolfsson elaborate on the issues of friction and price dispersion in electronic markets, providing insights into what has occurred to indicate what the future might hold in the chapter entitled Market Structure, Competition, and the Role of Small Business Understanding Digital Markets: Review and Assessment. However, the more interesting outcome of their discussion is the developments to watch in this area. Among them, we have begun to the see “reintermediation” of the digital marketplace by traditional firms. Reintermediation refers to the process through which a once-circumvented traditional intermediary is able to re-enter the chain of value-added activities that support buyer-seller transactions. One important guiding point here, highlighted by Chircu and Kauffman (1999), is that Internet-focused competitors can use a variety of strategies to attain competitive advantage in the short run, and maintain competitive parity in the long run. However, there
are very few strategies that will provide sustainable competitive advantage in the Digital Economy. The conceptual foundation for this argument is found in the hypothesis formulated by Malone, Yates and Benjamin (1987). They claimed that the reduction in coordination costs brought by IT would lead to greater use of markets. However, research to empirically test that hypothesis has informed us about the directions in the evolution of electronic market structure that are not entirely predicted by the prior theory. Unfortunately, some of the latest developments in this respect are missed in the book, though the reader still is exposed to the main directions.

The issues in organizational change occur at business process level of analysis. This topic is analyzed under three different perspectives: the sociotechnical perspective, computational organizational science, and the view of Digital Economy as an ever-changing social construction. The discussion raises the need of deploying information systems accompanied by significant organizational changes in order to maximize IT effectiveness. This is an important point to be evaluated by decision makers when they are considering the implementation of any IT-enabled change.

Brynjolfsson and Kahin’s collection of essays provide an informative overview of the issues and key directions for future development in e-business for both industry professionals and academic researchers. The levels of analysis presented also provide the reader with a framework that assists in understanding the current problems of the Digital Economy. Readers new to the world of e-business may find some of the articles heavy on jargon, with a few concepts lacking clear definitions or elaboration. An important missing area of coverage is emerging e-business models and the sustainability of these new strategies. However, even though this topic does not receive deep coverage in the book, the editors offer a more comprehensive perspective of organizational change in the Digital Economy. The readings offer a comprehensive and engaging account of the Internet economy, set an agenda for future research and development, and make a compelling case for advancing the discussion and understanding of e-commerce.
References List
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<tr>
<th>E-BUSINESS TOPIC</th>
<th>UNDERLYING QUESTIONS</th>
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| Macroeconomic implications       | ❑ What type of transformations have been brought about by the Digital Economy?  
                                    | ❑ How can we measure their impact?                                                                                                                  |
| Access, employment and the workforce | ❑ What are the barriers to participation in e-business, the options for overcoming them and the effectiveness and reliability of those options?  
                                    | ❑ What are the impacts on the size, composition, and level of education in the workforce?                                                           |
| Market structure and competition | ❑ How will the characteristics of IT-enabled goods and services impact market structure and competitive conditions?                                    |
| Organizational change            | ❑ What are the emerging types of relationships among firms?  
                                    | ❑ What implications are there for existing organizational structures?                                                                               |
| Small business                   | ❑ What are the opportunities for and impediments to the participation of small firms?                                                                  |