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Review
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corporation should not be inferred on the basis of what succeeded *ex post* (p. 300). Suppose, however, that we do focus on the failed strategies. Large numbers of purposeful and powerful executives have indeed pursued strategies that proved broadly unsuccessful: attempts at horizontal collusion in the late nineteenth century, consolidations unsupported by internal reorganization and rationalizations in the years that followed, and conglomerate mergers and unrelated diversification in the 1960s. These in the final analysis do resemble fads or "conceptions" more than they do insightful perceptions of new strategic possibilities. If Fligstein had restricted his claims to the inability of Chandler's paradigm to explain the transient sway held by these strategies, the madness of crowds, his book would be smaller in scope but much more successful than it is.

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The Measurement of Durable Goods Prices. *By Robert J. Gordon* · Chicago, Ill.: University of Chicago Press, 1990. xviii + 723 pp. Charts, tables, appendixes, references, and index. $85.00.

Reviewed by Timothy F. Bresnahan

Although the title of this volume gives an accurate flavor of its approaches and analyses, the results are far more important than "price measurement" suggests.

Technical progress embodied in new and improved capital goods is a source of economic growth through productivity gains. On the other side of the economy, new and improved consumer durables are a route by which market economies enhance consumers' welfare. When Robert Gordon writes that he "measures the prices" of producers' and consumers' durables, he means that he attempts to assess the quantitative importance of improvements in their quality over time. Throughout, the framework for quality measurement is valuation from the user's perspective. The book is thus about the role of the jet plane, the computer, and the digital telephone switch (among other inventions) in mid-twentieth century U.S. productivity growth and about the color television, the subcompact car, and the air conditioner, among other things, in consumers' welfare.

The results are striking, particularly for producers' durables. From 1947 to 1983, Gordon's period, official statistics show a 3.19 percent annual rate of growth in real investment in producers' equipment. Gordon calculates a much higher real growth rate, 6.15 percent. The difference lies in quality improvements missed by the official statistics, much of them in very technology-intensive goods. A smaller but still substantial correction, 4.58 percent per year (official) vs. 6.12 percent (Gordon), applies to consumers' durables. The equipment stock of the United States, either in factories or

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in households, has been growing rapidly. Despite the low U.S. savings rate, there is something of an investment boom going on, especially in high-technology investment goods.

The research supporting the new findings is impressive in both depth and breadth. The bulk of the book contains detailed analyses of quality improvements in specific categories of durables. It would make a long review just to list the categories, which include the vast majority of durables produced. For each category, Gordon typically finds a new data source for prices and observable quality attributes, makes a well-crafted argument about quality adjustment in the category, performs a "hedonic" price analysis, and offers a thoughtful summary of the strengths and weaknesses of the data and the analysis. Often a variety of hedonic methods test the reliability of the main, regression-based results. The rest of the volume is devoted to explicating and defending the hedonic method, and to drawing out the aggregate implications of the revised individual price series. Some of the conceptual issues here are important. How should energy-efficiency quality be treated in an era of rapidly changing energy prices? How should computers (very rapid quality-adjusted price fall) and desks (very slow) be weighted together into an aggregate office-equipment index?

The analysis is limited to issues that can be summarized in a quality-adjusted price, and it is not embedded in an analytical view of the technology invention and adoption process in the industries it studies. This leaves a thoroughly convincing impression that quality improvements in microelectronics-based durable goods have been very important. Gordon does not try to advance our understanding of how or why. Playing microeconomist to Gordon's macroeconomist, I note that many of the producers' durables with rapid price falls are most demanded in "particular" industries. The first two groups of durables treated at chapter length—commercial aircraft and electric utility generating equipment—and another, communications equipment, treated at very substantial length, are basically bought by regulated industries in Gordon's period. Regulators biased the airlines' and Bell's procurement policies toward higher quality capital, and the investment incentives facing electricity companies are dubious as well. I'd have similar worries about the most important growth areas for producers' durables not covered in this volume, hospital equipment. Gordon identifies computer equipment as having the most rapid quality-adjusted price fall. It, too, is more important (in his period) in financial services industries than in the economy at large, and more important in offices than in operations within single firms. The point is that the major demanders of these high-technology capital goods may have idiosyncratic behavior. In this volume, one will find very little analysis of how major demanders interacted with the advance of technology to shape new producers' durables, or of the early influence of government procurement.

Yet few readers reach the end of a 723-page book shouting "More!" and it is thoughtless to ask for additions to a book several decades in preparation. I hope my minor caveats about an extremely impressive piece of work form part of the basis for its influence on ongoing research.

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The Commercial Fishery of the Canadian Great Lakes. *By A. B. McCullough* • Ottawa, Ont.: Environment Canada, 1989. 153 pp. Charts, maps, illustrations, tables, appendixes, and bibliography. Paper, $11.40.

Reviewed by Douglas McCalla

This short study, prepared for Parks Canada in 1985, appears in its monographic series. In fourteen brief chapters, which in total comprise fewer than eighty pages of text, the book provides a balanced overview of economic, organizational, ecological, regulatory, and technological aspects of its subject. The text is enhanced by maps, tables, many well-chosen illustrations, and a good bibliography. There is no index. In relative terms, the Canadian Great Lakes fishery was never terribly significant, and in the twentieth century it has been dwarfed in economic significance by sport fishing. Fortunately, McCullough's story is no less interesting for the modesty of its subject.

The principal markets for the Canadian fishery were always New York and Chicago, though McCullough says less about the nature of demand and competition in those markets than one would like. Americans were legally barred from holding licenses to fish in Canadian waters, but in the nineteenth century, American middlemen often provided credit to Canadian fishermen and contracted for their catches. Sometimes fish were transferred on the water to American boats for delivery to American ports, but more commonly fresh and frozen fish were shipped by rail (and later truck) from Canadian ports. On Lake Erie, which tends to be the focus of the volume, fishermen worked from small ports, none of which had more than a modest percentage of the licensed fishermen. The work was seasonal, and crews, which numbered no more than six to eight, were commonly paid in shares. Although sail gave way to steam in most areas in the later nineteenth century and steam to diesel in the twentieth century, financing even the most expensive boats does not seem to have called for great capital.

A surprisingly extensive set of regulations, whose roots are not always clear, gave formal structure to the industry, but McCullough's treatment of public policy leaves the impression that it was actually a quite minor factor. Only since the 1950s have licenses been seriously limited in number, requirements for closed seasons were routinely waived under political pressure from fishermen, and fishermen regularly bent or stretched other regulations. An extensive government program of fish hatcheries had no demonstrable impact. In short, at the producing end, this was in many respects a classic decentralized industry.

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