TheVisible Hand The Managerial Revolution in American Business Alfred D. Chandler, Jr.

ALFRED D. CHANDLER, JR.

The Visible Hand

The Managerial Revolution in American Business

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The Visible Hand

To Fay—with love

Acknowledgments

This book had its beginnings some fifteen years ago, when the late Arthur C. Cole, Thomas C. Cochran, and I agreed to write a three-volume series on the history of American business. Cole was to review the evolving structure of the American business system. Cochran was to examine the place of business in its broader culture, and in 1972 published Business in American Life. I was to study changing business practices, particularly those concerned with the management of the firm.

My own study acquired its first focus when I received a grant from the Alfred P. Sloan Foundation to examine the rise of big business and the public response to it. By concentrating on the coming of modern business enterprise I believed that I could broaden my contribution to the series by describing the changing processes of production and distribution in the United States and the ways in which they have been managed, since the eighteenth century. The second part of the Sloan Foundation project, that dealing with the public response to big business, was carried out by Louis Galambos, who published his results in 1975 in The Public Image of Big Business in America, 1880–1940. The work I began under the Sloan Foundation grant was completed with assistance from the Division of Research, Graduate School of Business Administration, Harvard University. I am greatly indebted to the officers of the Sloan Foundation and to Dean Lawrence E. Fouraker and the heads of the Division of Research at the School who provided funds to pay for time and facilities so necessary to

The research and writing of this history was carried out in a traditional manner. It has been pieced together from reading business records and secondary works, and from countless discussions with students and colleagues. No teams of scholars or computerized data were involved. I learned much from graduate students, particularly those who wrote dissertations on topics related to the themes in this book. These included William H. Becker, Charles N. Cheape III, Russell I. Fries, Harold Livesay, Edwin J. Perkins, P. Glenn Porter, and Mary A. Yeager. I am espe-

the completion of such an extended study.

cially grateful to Chuck Cheape who, as my research assistant, carried out the laborious work of compiling and collating the data for Appendix A and other tables. Without the major contributions of these young scholars the study would have been far less complete.

As valuable were those long talks with academic colleagues, many of whom were willing to plow through parts or all of the lengthy manuscript at different stages of its completion. Fred V. Carstensen, Herman Daems, Louis Galambos, Thomas K. McCraw, H. Thomas Johnson, and P. Glenn Porter read large parts of the manuscript. Stuart Bruchey, Alfred S. Eichner, Stanley Engerman, Max R. Hall, Albro Martin, and Peter Temin read it from beginning to end. All provided invaluable suggestions that corrected errors of fact, refined interpretations, and improved the presentation of the data. I am especially indebted to Stuart Bruchey who, in giving the manuscript its final going-over, forced me to sharpen and define more precisely my terms and concepts and to Max Hall who worked with such care and patience to improve the organization of the chapters and the clarity of the prose.

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Without the constant encouragement of my wife, Fay, and her ability to assure the best of working conditions at home where all but the basic archival and library research was done, I could never have completed this or any of my other historical studies.

Many have contributed, but the final product is mine and for it I take full responsibility.

Alfred D. Chandler, Jr.

Cambridge, Massachusetts

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Introduction: The Visible Hand

The title of this book indicates its theme but not its focus or purpose. Its purpose is to examine the changing processes of production and distribution in the United States and the ways in which they have been managed. To achieve this end it focuses on the business enterprise that carried out these processes. Because the large enterprise administered by salaried managers replaced the small traditional family firm as the primary instrument for managing production and distribution, the book concentrates specifically on the rise of modern business enterprise and its managers. It is a history of a business institution and a business class.

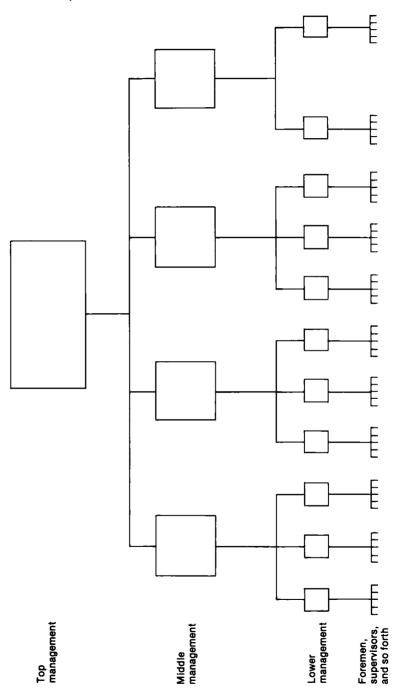
The theme propounded here is that modern business enterprise took the place of market mechanisms in coordinating the activities of the economy and allocating its resources. In many sectors of the economy the visible hand of management replaced what Adam Smith referred to as the invisible hand of market forces. The market remained the generator of demand for goods and services, but modern business enterprise took over the functions of coordinating flows of goods through existing processes of production and distribution, and of allocating funds and personnel for future production and distribution. As modern business enterprise acquired functions hitherto carried out by the market, it became the most powerful institution in the American economy and its managers the most influential group of economic decision makers. The rise of modern business enterprise in the United States, therefore, brought with it managerial capitalism.

Modern business enterprise defined

Modern business enterprise is easily defined. As figure 1 indicates, it has two specific characteristics: it contains many distinct operating units and it is managed by a hierarchy of salaried executives.

Each unit within the modern multiunit enterprise has its own admin-

Figure 1. The basic hierarchical structure of modern business enterprise (each box represents an office)



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istrative office. Each is administered by a full-time salaried manager. Each has its own set of books and accounts which can be audited separately from those of the large enterprise. Each could theoretically operate as an independent business enterprise.

In contrast, the traditional American business firm was a single-unit business enterprise. In such an enterprise an individual or a small number of owners operated a shop, factory, bank, or transportation line out of a single office. Normally this type of firm handled only a single economic function, dealt in a single product line, and operated in one geographic area. Before the rise of the modern firm, the activities of one of these small, personally owned and managed enterprises were coordinated and monitored by market and price mechanisms.

Modern enterprise, by bringing many units under its control, began to operate in different locations, often carrying on different types of economic activities and handling different lines of goods and services. The activities of these units and the transactions between them thus became internalized. They became monitored and coordinated by salaried em-

ployees rather than market mechanisms.

Modern business enterprise, therefore, employs a hierarchy of middle and top salaried managers to monitor and coordinate the work of the units under its control. Such middle and top managers form an entirely new class of businessmen. Some traditional single-unit enterprises employed managers whose activities were similar to those of the lowest level managers in a modern business enterprise. Owners of plantations, mills, shops, and banks hired salaried employees to administer or assist them in administering the unit. As the work within single operating units increased, these managers employed subordinates—foremen, drivers, and mates—to supervise the work force. But as late as 1840 there were no middle managers in the United States—that is, there were no managers who supervised the work of other managers and in turn reported to senior executives who themselves were salaried managers. At that time nearly all top managers were owners; they were either partners or major stockholders in the enterprise they managed.

The multiunit enterprise administered by a set of salaried middle and top managers can then properly be termed modern. Such enterprises did not exist in the United States in 1840. By World War I this type of firm had become the dominant business institution in many sectors of the American economy. By the middle of the twentieth century, these enterprises employed hundreds and even thousands of middle and top managers who supervised the work of dozens and often hundreds of operating units employing tens and often hundreds of thousands of workers. These enterprises were owned by tens or hundreds of thousands of shareholders and