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Orders, Production,
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a Cyclical and
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VICTOR ZARNOWITZ

University of Chicago and National
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*(Resolution adopted October 25, 1926, and revised February 6, 1933,
February 24, 1941, and April 20, 1968)*

To Lena, Steven, and Arthur

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Preface

THIS book was developed from a study mainly concerned with the characteristics of manufacturers' new orders as a type of leading indicator of general business changes.¹ Although limited in scope, this work gave early recognition to the "dynamic and critical role of the demands represented by the new order series." Attempts to gain a better understanding of this role led to a much more extensive and intensive inquiry than was initially contemplated. Completion of the book seemed near some time ago, but it was delayed by other work and then by the consequent need to update the empirical contents of the manuscript.

This study deals primarily with the cyclical aspects of selected variables and their relationships. However, it also includes some analysis that might be termed "structural," for example, regression estimates based on time series for different industries and types of processes. It covers a rather wide ground: short-term order-production sequences, relationships between delivery period and price changes, investment commitments and expenditures, orders and inventories, etc. This diversity reflects the diversity of orders, their structure, and their functions. The unifying element is also provided by orders, an expression of effective demand that in one form or another appears in each of the areas covered.

At the National Bureau, many individuals cooperate to produce a book, in ways that make it proper to acknowledge their contributions collectively; consequently, this report is truly "A Study by the National Bureau of Economic Research." Another institution to which I owe thanks for the generous provision of time and assistance for research is the Graduate School of Business of the University of Chicago. I also wish to acknowledge the aid of a Ford Foundation faculty research fellowship in 1963-64.

I am most indebted to Geoffrey H. Moore for his encouragement, suggestions, and comments, which helped me in every stage of this

¹ A report on this phase of my work was published as "The Timing of Manufacturers' Orders During Business Cycles," in Geoffrey M. Moore, ed., *Business Cycle Indicators*, Vol. 1, Princeton University Press for the National Bureau of Economic Research, 1961, Chap. 14.

study. Rosanne Cole gave me helpful advice and supervised some computations. An early version of parts of the manuscript benefited from the criticisms of Millard Hastay, Ruth P. Mack, and Thomas M. Stanback, Jr.; a later version, from a review by Ilse Mintz and Robert Eisner. Valuable comments on Chapter 5 were made by Zvi Griliches. Chapter 7 incorporates, with modifications, parts of an earlier paper of mine,² which received useful comments from George Stigler and Jacob Mincer, among others. Thanks are also due to Geoffrey H. Moore, Charles B. Reeder, and Emilio G. Collado for their service and valuable advice as members of the Board of Directors reading committee.

I am grateful to the following persons for aid in collecting and interpreting data on new and unfilled orders, shipments, and inventories: Lawrence Bridge and Genevieve B. Wimsatt of the U.S. Department of Commerce, Bureau of Economic Analysis; Julius Shiskin, Office of Management and Budget; and Maxwell R. Conklin and Shirley Kallek of the Bureau of the Census. They and others helped me to avoid some errors but bear no responsibility for any remaining deficiencies.

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² *Unfilled Orders, Price Changes, and Business Fluctuations*, Occasional Paper 84, New York, NBER, 1962 (reprinted from *Review of Economics and Statistics*, November 1962).

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