Volume Title: Factors in Business Investment

Volume Author/Editor: Robert Eisner

Volume Publisher: NBER

Volume ISBN: 0-88410-484-2

Volume URL: http://www.nber.org/books/eisn78-1

Publication Date: 1978

Chapter Title: Front matter, Factors in Business Investment

Chapter Author: Robert Eisner

Chapter URL: http://www.nber.org/chapters/c3837

Chapter pages in book: (p. -26 - 0)

Robert
Eisner
*Northwestern
University*

Factors in Business Investment

National Bureau of
Economic Research
General Series No. 102

Published for the
NATIONAL BUREAU OF
ECONOMIC RESEARCH, INC.
by
BALLINGER PUBLISHING COMPANY
A Subsidiary of J. B. Lippincott Company
Cambridge, Mass.
1978

This book is printed on recycled paper.

International Standard Book Number: 0-88410-484-2

Library of Congress Catalog Card Number: 78-7548

Printed in the United States of America

Library of Congress Cataloging in Publications Data

Eisner, Robert.
Factors in business investment.

Bibliography: p.
1. Capital investments—United States. I. National Bureau of Economic Research. II. Title.
HG4028.C4E45 332'.0415'0973 78-7548
ISBN 0-88410-484-2

Factors in Business Investment

NATIONAL BUREAU OF ECONOMIC RESEARCH

Relation of the Directors to the Work and Publications of the National Bureau of Economic Research

1. The object of the National Bureau of Economic Research is to ascertain and to present to the public important economic facts and their interpretation in a scientific and impartial manner. The Board of Directors is charged with the responsibility of ensuring that the work of the National Bureau is carried on in strict conformity with this object.

2. The President of the National Bureau shall submit to the Board of Directors, or to its Executive Committee, for their formal adoption all specific proposals for research to be instituted.

3. No research report shall be published by the National Bureau until the President has sent each member of the Board a notice that a manuscript is recommended for publication and that in the President's opinion it is suitable for publication in accordance with the principles of the National Bureau. Such notification will include an abstract or summary of the manuscript's content and a response form for use by those Directors who desire a copy of the manuscript for review. Each manuscript shall contain a summary drawing attention to the nature and treatment of the problem studied, the character of the data and their utilization in the report, and the main conclusions reached.

4. For each manuscript so submitted, a special committee of the Directors (including Directors Emeriti) shall be appointed by majority agreement of the President and Vice Presidents (or by the Executive Committee in case of inability to decide on the part of the President and Vice Presidents), consisting of three Directors selected as nearly as may be one from each general division of the Board. The names of the special manuscript committee shall be stated to each Director when notice of the proposed publication is submitted to him. It shall be the duty of each member of the special manuscript committee to read the manuscript. If each member of the manuscript committee signifies his approval within thirty days of the transmittal of the manuscript, the report may be published. If at the end of that period any member of the manuscript committee withholds his approval, the President shall then notify each member of the Board, requesting approval or disapproval of publication, and thirty days additional shall be granted for this purpose. The manuscript shall then not be published unless at least a majority of the entire Board who shall have voted on the proposal within the time fixed for the receipt of votes shall have approved.

5. No manuscript may be published, though approved by each member of the special manuscript committee, until forty-five days have elapsed from the transmittal of the report in manuscript form. The interval is allowed for the receipt of any memorandum of dissent or reservation, together with a brief statement of his reasons, that any member may wish to express; and such memorandum of dissent or reservation shall be published with the manuscript if he so desires. Publication does not, however, imply that each member of the Board has read the manuscript, or that either members of the Board in general or the special committee have passed on its validity in every detail.

6. Publications of the National Bureau issued for informational purposes concerning the work of the Bureau and its staff, or issued to inform the public of activities of Bureau staff, and volumes issued as a result of various conferences involving the National Bureau shall contain a specific disclaimer noting that such publication has not passed through the normal review procedures required in this resolution. The Executive Committee of the Board is charged with review of all such publications from time to time to ensure that they do not take on the character of formal research reports of the National Bureau, requiring formal Board approval.

7. Unless otherwise determined by the Board or exempted by the terms of paragraph 6, a copy of this resolution shall be printed in each National Bureau publication.

(Resolution adopted October 25, 1926, as revised through September 30, 1974)

Contents

List of Tables

Tables with no prefix before their numbers are reproduced in the text; those with asterisks appear in abbreviated form. The designation M indicates a table available only on microfiche. All of the tables, including those in the text, appear in full on microfiche.

Preface

This book has been a long time aborning. In 1951 and 1952 I completed a number of interviews on investment with top executives of large corporations in connection with a project on business expectations and planning under the overall direction of Franco Modigliani.[1] This brought me early to the conclusion that an economist can no more rely on businessmen's perceptions and rationalizations to explain the determinants of investment than a physician can rely on patients' introspections alone to explain illness. The analysis offered by participants in the investment process may well suggest hypotheses and models to be tested. But hard scientific knowledge must come from the quantitative measures of what firms actually did and of the experiences they actually had that were relevant. Thus, early in my investigations, I undertook to gain access to a body of data that would permit relating plans and expectations reported in surveys to information on capital expenditures, profits, sales, depreciation, existing assets, and other variables relevant to investment obtainable from either surveys or accounting records. This volume is the final result.

Most fortunately, Dexter M. Keezer, then director of the economics department of the McGraw-Hill Publishing Company, permitted me to obtain individual firm data of McGraw-Hill capital expenditure surveys and to arrange to have them matched by a

[1] The project was financed by the Merrill Foundation for Advancement of Financial Knowledge and by the University of Illinois. My own contribution was reported in a monograph, *Determinants of Capital Expenditures: An Interview Study* (1956), and in a lengthy paper, "Interview and Other Survey Techniques and the Study of Investment" (1957).

member of his staff with accounting information, generally from Moody's manuals. While the McGraw-Hill staff member, of course, knew the identity of the firms, I was furnished the data with firm identities deleted but with each firm's major industry group classification listed.

Initially, the data were processed by Beryl Hegerty, who worked on the McGraw-Hill surveys. For subsequent help, and for the great bulk of the basic input in the present study, I am most indebted to Margaret K. Matulis, who for many years conducted the surveys, and to Douglas Greenwald, current director of the department of economics, who extended the collaboration begun earlier.

Whole generations of graduate students and undergraduates worked with me as research assistants in the enormous task of processing, checking, and analyzing survey and collateral data over the years. After the processing of new data year after year came extensive and intensive statistical examination, essentially with least squares regressions involving a fairly elaborate analysis of variance and covariance. In laying the foundations of much of this work in the early years, Robert M. Coen, then my research assistant, was of critical assistance; he played a key role in planning a basic, specialized computer program that permitted estimating simultaneously various aggregations and disaggregations of time series and cross sections of the same large body of data. Of similar critical assistance in the actual construction and writing of the original program, as well as in most of its increasingly complex development over time, was Betty Benson of Northwestern University's Vogelback Computing Center.

Many others helped me over some two decades of work, and I hesitate, even by way of grateful acknowledgment, to list them all and recall arduous labors they may have comfortably forgotten by now. I must, however, stubbornly identify some of those who were most involved. They include Patricia Wishart, who did much in the early stages in supervising data processing and in developing price indexes to fit the various categories of firms and data made available to us, as well as Tugrul Aladag, Joel Auerbach, Michael Cummins, Joel Fried, Dosier Hammond, David Hartman, Jon Joyce, Arnold Katz, Elsie Kurasch, Margery Bechtel McElroy, Keith McLaren, Allan Mendelowitz, Judith Mitchell, John Pickerill, Hugh Pitcher, Jon Rasmussen, Bernard Reddy, Georges Rocourt, Jay Salkin, Kenneth Smith, John Soladay, Richard Strauss, and Robert Welch. Among those most recently involved in work with tables (intensified preparation, verification, and conforming of tables and text), as well as in final regressions and other computations to update earlier results or to check last minute hunches, are Patrick Lawler, John Felzan, Paul Burik, Steve Harper, David Nebhut, and Paul Nishimoto.

This volume might well have been titled "Some Things Old and Some Things New." A few of the chapters stem from papers presented at international conferences and not offered for journal publication. Some others take advantage of varying but often considerable quantities of data for later years to enrich as well as tie together findings reported in journal articles some time ago. I am grateful to *The American Economic Review* for permission to excerpt substantial portions, particularly in Chapter 4, of my articles "A Permanent Income Theory for Investment: Some Empirical Explorations" (June 1967) and "Investment and the Frustrations of Econometricians" (May 1969). I am also grateful to *The Review of Economics and Statistics* for permission to include as Chapter 8 "Components of Capital Expenditures: Replacement and Modernization Versus Expansion" (August 1972).

As all must know, a work of this kind is not possible without financial support. My own list of benefactors is embarrasingly long. Very early—but important in freeing time for an otherwise heavily burdened junior faculty member—came a faculty research fellowship of the Social Science Research Council. Subsequently I was the beneficiary of fellowships from the Ford Foundation, the Guggenheim Foundation, and the Center for Advanced Studies in the Behavioral Sciences. Northwestern University has, of course, been of major assistance in matters both obvious and subtle. I have also benefited from my position as a senior research associate of the National Bureau of Economic Research. But the most substantial financial support has certainly come via a series of grants from the National Science Foundation. I trust that after a considerable stream of scattered articles in various professional journals, this long promised volume will move closer to balancing the account.

The actions and comments of colleagues at Northwestern University and elsewhere, their insights and corrections on matters small and large, have been most helpful. I can hardly single them all out here, but must again insist upon expressing my indebtedness to at least a few. Franco Modigliani, in early phases of my work, had a lasting influence on my conceptions and formulations of relations involving anticipations (of capital expenditures), expectations (of sales), and realizations. I appreciate the assistance of Meyer Dwass and T.N. Srinivasan in various problems of statistics and econometrics, as well as the useful comments by Bernt Stigum after his careful reading of part of the manuscript. Also, I have gained enormously from my collaboration with Robert H. Strotz in our

research paper "Determinants of Business Investment" (1963), from his comments on draft manuscripts, and from discussions with him over a long time.

At the National Bureau of Economic Research, I am most grateful to Gary Fromm, M.I. Nadiri, and Paul Wachtel of the staff reading committee and to Robert E. Lipsey, director of international studies and director of the New York office of the National Bureau of Economic Research. Significant revision and improvement in the final draft are traceable to their comments. I am also appreciative of comments of the NBER Board of Directors Reading Committee: Moses Abramovitz, Gardner Ackley, and Rudolf A. Oswald. And many thanks go to NBER editor Hedy D. Jellinek, who edited the manuscript for publication.

Finally, I owe an enormous debt to Molly Fabian, who not merely typed countless pages of staggering tables and text with astonishing expertise but functioned as executive secretary for me and our Econometrics Research Center in ways that go far beyond excellence of performance. She made a research home for all those who helped me, as well as many others. Speaking for them as well as for myself: my heartfelt gratitude!

Robert Eisner

Factors in Business Investment