HOW TO CONTROL PRODUCTION COSTS

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PHIL CARROLL

INDUSTRIAL ORGANIZATION AND MANAGEMENT SERIES

HOW TO CONTROL PRODUCTION COSTS

PHIL CARROLL

Professional Engineer
Author
"Timestudy for Cost Control"
"Timestudy Fundamentals for Foremen"
"How to Chart Timestudy Data"

FOREWORD BY

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McGRAW-HILL BOOK COMPANY, INC.

NEW YORK TORONTO LONDON

1953

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Library of Congress Catalog Card Number: 52-10844

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FOREWORD

The whole subject of "How to Control Production Costs" that has been covered so thoroughly by Phil Carroll in this book has always been important and has become increasingly so during the past two decades.

In the early days of the industrial era of this country, there were relatively few competitive manufacturing firms. Through reinvestment of earnings, these firms increased the output per man hour, lowered their prices, increased their volume, and enjoyed the prosperity that invited competition. As the number of competitive firms increased, the necessity for the control of production costs increased. The firms that were successful in the control of their production costs survived. Those that did not appreciate the importance of the problem, or failed to find a satisfactory solution to it, became business casualties.

It is doubtful that there ever has been a period in the industrial history of our country when the necessity for controlling production costs has been as great as it is today, or when it has been as difficult to accomplish.

One of the factors which makes the problem urgent and difficult at this time is the fact that industry, in general, has enjoyed a period of at least twelve years of unusual prosperity. During that time, there has been less necessity for careful control of production costs than usual because, during the World War II period, emphasis was on getting out production. Cost was a secondary consideration. In the postwar period, because of the pent-up demand for civilian goods that had not been available during the war, emphasis was again on production, regardless of price, rather than on the control of production cost.

For industry, in general, it has been a period of large volume, high prices, and general prosperity, which combine to breed carelessness in the control of production costs. Many of industry's younger executives have gained most of their experience in this lush period. That makes it difficult for them to appreciate fully the necessity for close control of production costs in normal times.

There is much evidence indicating that this comfortable situation is beginning to change. While defense work still sustains the general level of production, there has been a change from a seller's to a buyer's market in many lines. Resistance to price increases is apparent, although costs continue to rise. Some day our economy will drift or dive into a corrective period, when there will be lower volume, lower prices, and higher costs. At that time, the firms that have learned to control production costs will again be the survivors, as they always have been during similar periods in the past.

The convenient practice in some complex industries of applying overhead expenses uniformly to all products, resulting in similar costs for a mixed group of products, will not be sufficiently accurate in a highly competitive market. The success of many firms will depend upon their knowledge of the accurate costs of individual products.

This book could well be divided into two parts of almost equal value: (1) the first chapter, which deals with the necessity for the control of production costs, and (2) the other 25 chapters, which describe in workable detail the means of accomplishing the control with diversified products.

To the top executive, the most important part of Phil Carroll's book is the first chapter, in which he develops the necessity for controlling the cost of production in order to offset the deterioration in the standard of living in this country resulting from inflation and high taxes. He will get from it inspiration for constantly supporting his junior executives in their work of carrying out the difficult steps involved in the establishment and maintenance of the control of production costs.

BRUCE WALLACE
Financial Vice President
Otis Elevator Company

New York, N.Y.
September 29, 1952

PREFACE

My first book, "Timestudy for Cost Control," emphasizes the need for sound work standards. My concern goes beyond those of fair and equitable work measurement for incentive purposes. That is vital, to be sure. Without successful incentives, I find that work standards have little practical use because pressures are applied to adjust them to something different. Therefore, my belief is that we should have both standards and incentives. Combined, these can serve as the foundation for the more important cost-control structure. After all, if industry fails to make profit, we have no further use for either timestudy or incentives.

You might say that this book is an extension of my first. In it, I have tried to show ways to use the foundation we call a common denominator. Such is necessary to bring our diversified products together. And in most plants, our best common denominator is standard time. We should use it to get more facts in costing. Better costing is required to guide industrial management. Our costs are up and rising. Our competition is growing from those abroad we have equipped and trained. Our tax load gets heavier and more burdensome. We have no escape but to make more profits. Industry pays all the bills.

To meet our obligations in our American way, we must try to turn out better products at lower prices. This means cost reduction through methods improvement. In this effort, good timestudy can be most helpful. But here I'm stressing also other tools of management—particularly engineering, production control, suggestion plans, and quality control. None of these contributes, however, that does not pay its way. Hence, the basic necessity for controlling costs.

You can't find out what costs are by the "Dead Hand of John Gough" methods as G. Charter Harrison calls them. Much of the costing that I've observed does not apply our complex overhead expenses where they belong. That is the subject I endeavor to unravel in this book. I hope my efforts will prove helpful to those willing to break away from management by imitation.

Many of the ideas expressed here have been stolen from others. Many examples have been taken from my own experiences. Identities have been concealed in most instances on purpose. Yet, I must mention C. D. "Chief" Dyer, who put me in the position where I had to learn, and Bruce Wallace and De Voitsberger who taught me what I did absorb. Also I am indebted to some folks who should be mentioned specifically. J. Carlisle MacDonald granted me permission to use illustrations from the 1950 Annual Report of U.S. Steel. Edmund Ruffin said I could use the chart showing "First Six Years of Model T" taken from General Motors' excellent publication, "American Battle for Abundance." Miss Bettina Bien opened the door to quotations from the Foundation for Economic Education, Inc. H. T. "Tom" Hallowell, Jr., sent me the originals for the cartoons illustrating the paths of special and standard products through our overhead paper mills. L. C. "Jack" Morrow took time from his crowded schedule to make my first chapter readable.

Beyond these are four to whom I am indebted. Charlie Thomas got after me to "write it down." My son, Phil, who was working in the accounting field, read the material and made constructive suggestions. My secretaries, Mrs. Shirley Mangin and my daughter-in-law, Lee, struggled through the endless details of preparing the manuscript. I hope you appreciate their help as much as I do. Your comments and criticisms will be most welcome.

PHIL CARROLL

Maplewood, N.J.
October, 1952

CONTENTS

CHAPTER 1

WHY WE NEED COST CONTROL

Mr. Webster says, "Control is to exercise a directing influence over." You could interpret his definition to mean holding a static condition. But that would be dangerous. We must offset

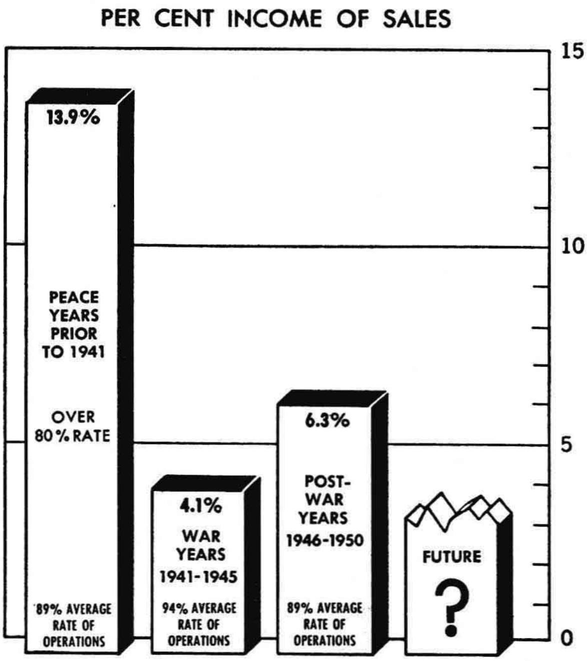

FIG. 1. Chart showing the "Profit Squeeze" in our important basic industry, steel (U.S. Steel).

rising costs. We have to make progress. We dare not lose our competitive positions. So I want to insist that reducing costs is part of controlling. What we lose in one part of cost, we must more than save in another to assure profits.

Raising prices is not the answer. That course does not improve our standards of living. We attained our high level by turning out better products at lower prices. The "raises" in our living standards were created by the better management of machines, materials, and men—and, I like to add, *time*.

Higher productivity is the underlying cause of our nation's progress. In this advance, managements have been guided by controls supplied largely by cost accounting. They have been aided by industrial engineering. But we have to devise still better direction finders because profits are being siphoned off.

Repeated wage increases, price controls, and punitive taxes have cut profit percentages (Fig. 1). Break-even points are treacherously high. To survive under the "ability to pay" formula, we have to make more profit.

WHY MORE PROFIT?

Profit is the incentive in industry. Profit is the security of jobs. Profit is the "seed corn" of progress and expansion. Profit is the taxpayer.

You may say, "We're doin' all right. We make a nice profit." Lots of firms do. Yours may even show the typical "huge profits" the bureaucrats attack and the unions scream about. Those "huge profits" are both unusual and unreal. They flowed in without any real competition. Those dollars are debased. Part of the "profit" came from the markup of inventory produced at earlier dollar values. Part was created artificially by the overabsorption of depreciation based on preinflation costs.

PIGS AND POTATOES

Price and wage controls cannot solve the problem of spending more money than we have. These devices have no connection whatever with printing extra dollars to pay for potatoes we don't want in order to pay out still more money to paint them blue. On this merry-go-round, "The people pay thrice, in prices today, in taxes tomorrow, and in the loss of their savings the day after." [1]

As a result, the lathe hand "needs" more money. When he gets it, his food bill goes up because prices go up. So do his taxes, because he is paid in dollars instead of steak and potatoes. He thinks he has part of his problem solved with raises tied to

[1] Pettengill, Samuel B., Inflation Concerns Everyone, *The Reader's Digest,* October, 1951.

the Bureau of Labor Statistics cost of living. He thinks he will get closer to a solution by legislating his taxes into the Bureau of Labor Statistics cost-of-living index. The index as now compiled is a "snare and a delusion" because income taxes are "a major factor in the cost of living of almost every union family."[2] All these remedies are pointing to the paradox that exists in Great Britain where "economic planning by the government has provided free dentures for the populace but almost no meat for them to chew."

SOME RESULTS

If you want to see some results, study the startling figures given by Lowell W. Herron.[3] Here's how values have declined.

Year	Value of Bond, in Dollars with Interest Added	Merchandise These Dollars Would Buy at 1940 Prices
1940	$ 75	$75.00
1941	76	70.89
1942	77	65.75
1943	79	63.83
1944	81	64.55
1945	83	65.15
1946	86	63.46
1947	90	58.50
1948	94	57.43
1949	98	60.66
1950	100	57.00

Neither can we live on borrowed money indefinitely. Look at how much of our future is mortgaged already.

Federal Debt[4]	*Per Family*
1929	$ 571
1939	1,165
1950	6,786

[2] Living-Cost Index Assailed by Union, *New York Herald Tribune*, Sept. 16, 1951.

[3] Herron, Lowell W., *The Clarkson Letter*, February–March, 1951.

[4] High, Stanley, In Washington It's Waste as Usual, *The Reader's Digest*, July, 1951.