
G A R Y J . Z E N Z

PURCHASING

A N D T H E

MANAGEMENT

O F

MATERIALS

PURCHASING AND THE MANAGEMENT OF MATERIALS

Sixth Edition

GARY J. ZENZ

*The Florida State University
Tallahassee, Florida*

Edited by

George H. Thompson

*Trinity University
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To Joe, Bridget, and Kathy
and to the memory of Martha Zenz
and “Fronie” Rueth

About the Author

Dr. Gary J. Zenz is an internationally recognized leader in the fields of purchasing and materials management. His background combines an intimate knowledge of practical business conditions, gained through executive positions, with comprehensive academic credentials. He was director of purchasing and director of market research for three major corporations before entering academia. He has also consulted with leading organizations, including members of the Fortune 500 as well as the Chicago Board of Trade, OAS, and Merrill Lynch. Dr. Zenz lectures at leading universities and is a frequent speaker at national and international conferences throughout the United States and Canada.

Dr. Zenz received a Ph.D. in Business and Economics from the University of Wisconsin and has taught at several universities. He is currently Director of the Center for Advancement of Procurement at The Florida State University. He has been named an “Outstanding Educator of America,” is the author or co-author of numerous articles and several books, and holds memberships and offices in professional organizations.

Preface

This sixth edition presents the principles and procedures of purchasing and materials management in their modern, multidimensioned framework and incorporates major additions and revisions. Separate chapters on international purchasing and value analysis have been added. The two chapters on procedures for selecting suppliers and related considerations have been combined into one to convey better the modern “sourcing” process and to provide a unified flow. The earlier chapters on control and audit procedures and reporting have also been modified and restructured into one chapter. The material on computer applications has been significantly expanded, and management information systems and decision support systems are presented as requisites of modern materials management. Deregulation has been considered as a transportation variable, coverage of cost–price analysis has been expanded and updated to include current cost containment and profit improvement procedures, and discussions of just-in-time purchasing and other “overseas” influences have been integrated.

Economic concepts relevant to the macro and micro environments of purchasing have also been outlined and developed in this edition. Additional new subjects include conglomerate organizations, multinational operations, international sourcing, vice-president sourcing, and the comparative advantage of international sources.

Six entirely new cases have been added to broaden the means of teaching

negotiation, cost–price analysis, and ethics. All cases have been alphabetically arranged for easy reference.

Topics in this sixth edition have been organized to make it an effective preparation for the Certified Purchasing Managers (C.P.M.) and American Production and Inventory Control Society (CPIM) exams.

With all the many changes made in this edition, the coverage of fundamental purchasing and related materials management concerns, which have provided the framework of the previous five editions, has been carefully maintained.

Special thanks and recognition are extended to Dr. George H. Thompson of Trinity University, San Antonio, Texas, for his editorial contributions; they were invaluable in bringing this sixth edition to press.

Gary J. Zenz
Tallahassee, Florida

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CHAPTER 1

The Functions and Contributions of Purchasing and Materials Management — an Introduction

Historical Perspective

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Management Expectations of Purchasing Personnel

Occupational Outlook

The decade of the 1980s has witnessed major events which have had a direct impact upon the significance of the procurement function in business and the economy. Monetary pressures used by the Federal Reserve System to break inflation have produced record high interest rates, making purchased inventories increasingly expensive. This has triggered renewed interest in developing close vendor relations to minimize safety margins of inventories. Increased international competition has forced American industries to look at foreign

purchasing practices, resulting in a renewed respect for the Japanese style of close vendor relations.

High interest rates and expensive inventories have caused increasing respect for the output-input system, in which purchased materials would ideally move from the seller's finished goods line to the buyer's using areas. The 1950s witnessed wide swings in economic activity, which precipitated three recessions in the decade and focused a great deal of attention toward cost-cutting efforts on purchased supplies. In governmental agencies an increasingly conservative attitude has manifested itself in the deregulation of many industries, producing new negotiation opportunities for purchasing personnel and forcing a reevaluation of proper social consciousness as organizations and individuals are asked to allocate their dollars toward social issues. Finally, taxpayers have forced a reevaluation of spending in the public and nonprofit sectors, highlighting the need for professional procurement in these areas.

This chapter considers procurement activities in terms of these shifts in attitudes and actions and previews the comprehensive chapters that follow. The book as a whole is designed to present the principles and procedures that represent the most professional approach to purchasing and materials management in the private, public, and nonprofit sectors of our economy.

HISTORICAL PERSPECTIVE

There are few historical records of the origin of purchasing. This is to be expected, since the first industrial purchase was made in the dim past when someone bought materials or supplies to be used in making an article to be sold instead of used. Before 1900 there were few instances of purchasing departments separate and distinct from production or other operating departments. Such purchasing departments as did exist were found mostly in the railroad field. The first book dealing specifically with the purchasing function was published in 1887. The fact that the earliest writings on this function were railroad publications—on railroad purchasing and written by railroad personnel—can be explained by the predominance at that time of railroad organizations in the economy of the country.

At about the same time, occasional articles began to appear in some of the technical trade publications dealing with some of the aspects of purchasing. One such article, by James M. Cremer, appeared in the August 1908 issue of *Cassier's Magazine*, an engineering publication. This article was entitled, "The Engineer as a Purchasing Agent." In an article appearing in *Iron Age* in January 1913, John C. Jay, Jr., general manager of sales of the Pennsylvania Steel Corporation, suggested the organization of a group to promote the interests of purchasing agents through more publicity regarding their activities. Although this article did not result in the immediate organization of the National Associa-

tion of Purchasing Agents, it seemed to indicate emerging interest in the purchasing function.

The National Association of Purchasing Agents was founded in 1915. Purchasing came of age during the early part of World War I, under the impact of the expanded production brought about by the war. At its fifty-second annual convention in Washington, D.C. (May 1967), the association voted to change its name to The National Association of Purchasing Management, in recognition of the managerial status that purchasing had attained.

OVERVIEW OF PRESENT PROCUREMENT OPERATIONS

Organizations view procurement as a professional activity that includes all the activities involved in obtaining materials at minimum cost, transporting them, storing them, and moving them toward the production process. Included in this modern approach is the economic analysis of supply, demand, and price and the assessment of international events as they affect materials.

The diversity of the purchasing function is reflected in many organizations that utilize purchasing economists to provide economic assistance for buyers. Purchasing personnel often perform as practicing economists as they project prices and demand—supply relationships, strive to achieve delicate inventory balance support to operations with minimum cost and capital, and uphold congenial supplier relationships.

There is considerable variation among organizations in the proportion of income dollar that is spent on purchasing goods and services. In highly mechanized mass-production industries, labor costs are low and the proportion of income dollar spent for goods and services is relatively high. For instance, the automobile industry spends from 50 to 60 percent of its sales dollar for goods and services, whereas craft organizations, in which skilled labor predominates, have a lower-than-average purchase percentage. In addition, the proportion spent by the government is usually smaller than in private industry; it is estimated that the federal government expends 36 percent of its receipts on purchased goods and services. The distribution of expenditures among federal, state, and local governments is, however, continually shifting with the political philosophy of the time.

PURCHASING AND THE ECONOMY

In analyzing business operations, the phrase *value added concept* is often used to express the difference between the cost of the component materials and the selling price of a finished product. The amount of this differential represents the unique contribution of each organization to the production process. In our interrelated economy, firms tend to specialize and produce segments of total

products. Many companies produce component parts and materials for other firms, utilizing economies resulting from a combined demand for their specialized products. As a result the average U.S. firm now buys more than half of the dollar value of its sales; the value added is typically less than 50 percent of its sales. Conversely, the average company purchases materials valued at more than half of what it sells. An organization's profit is thus, to a large extent, determined by how effectively it procures and manages these materials.

The efficiency of any organization is correspondingly contingent on the availability of component parts and materials in the proper quantity, quality, and price range. Failure in any of these areas increases costs and decreases profit and can precipitate an economic crisis.

A MANAGERIAL PROCESS: MULTIPLE OBJECTIVES

Purchasing is a managerial process that goes far beyond simply buying materials. It includes planning and policy procedures that cover a wide range of related activities, including research and development as required for the proper selection of materials and sources; ascertainment of delivery; inspection of documents on incoming shipments to ensure quantity and quality compliance; development of procedures to implement buying policies; coordination of purchasing activities with other internal divisions of the concern such as engineering, production, and accounting; and development of effective communications with top management in order to ensure a complete appraisal of the performance of the purchasing function.

PURCHASING AS A SOCIOECONOMIC FORCE

As a major factor behind the allocation of millions of business dollars, purchasing is increasingly recognized, and in some cases formalized, as a significant socioeconomic force. By challenging price increases and promoting competition between firms and materials, purchasing's efforts have a direct impact on the costs and prices, hence inflationary pressures within the economy. Efficient use of scrap and by-products, a major purchasing role, has important repercussions on the nation's resource supply. In the process of vendor selection, purchasing influences environmental policies by considering the pollution control policies of prospective suppliers. Similarly, the concerns expressed by purchasing personnel to prospective vendors about their hiring of minorities influences the employment policies of these firms, collectively influencing the nation in these areas. Finally, decisions on the use of foreign sources of supply directly influence the nation's balance of payments and the international status of the currencies involved.