

Preface

It was only four years ago since the sixth edition of this book was published, and the global aviation industry has experienced numerous changes that, in many cases, were not predicted. The seventh edition of *Air Transportation: A Management Perspective* covers the reasoning behind such changes and attempts to forecast the future to a certain degree in terms of how air transportation will evolve.

On September 11, 2001, the aviation industry started a new era in history as a result of the terrible terrorist attacks against the United States. The Iraqi crisis, Severe Acute Respiratory Syndrome (SARS), record fuel and oil prices, massive financial losses, looming threats of terrorism, and political instability have contributed to continued restructuring of the industry. General aviation, including business aviation, and commercial aviation have been impacted as have manufacturers and all other participants in aviation. At the time of the last printing, the industry was in a period of survive, adapt and recover. Today, the industry is in a period of rethink resulting in organizations becoming more efficient as a result of recent turbulent times. Airlines continue to fail as will always be the case but there are a lot of positive success stories at the same time. Aircraft manufacturers like Airbus and Boeing have experienced positive growth with the design of new and efficient aircraft while regional jet manufacturers have experienced, in some cases, negative results due to the changing nature of route network development and airline restructuring programs. Such manufacturers are being faced with the challenge of determining what the next stage in aircraft technology is.

A previous edition of this book stated 2005 would be the year in which the global air transportation industry would be back at “normal” levels. For the most part, this is true. Some regions of the world were somewhat isolated from the events of 9/11 and more recent events and air carriers of different types and sizes are excelling. In other regions of the world, there are distinctive growth patterns ranging from slow to fast. In 2011, load factors are back up to regular levels and yet airlines continue to struggle as a result of annually increasing operational costs.

The global air transportation industry changes on a daily basis and it is important to understand this change must be examined on a regional basis more so than a global basis. As defined by the International Civil Aviation Organization (ICAO), the world consists of North America, Latin America and Caribbean, Europe, Asia-Pacific, Africa and the Middle East. Building on a tested framework of subject areas, this book incorporates the trends, challenges and strategies impacting all regions of the world creating a modern revision suitable for academic and industry use for some time to come. The challenge of an author writing a new edition of a well established book, is to produce something readers

are already familiar with but are introduced to new information above and beyond the predecessor.

The seventh edition remains introductory in nature providing the reader with a solid foundation of the air transportation industry and a greater appreciation of the major management functions within an airline. Various references are provided at the end of each chapter encouraging the reader to explore and keep abreast of current periodicals and web sites. The reader should grasp enough knowledge to reason accurately and objectively about problems facing the industry and the development of a lasting interest in the air transportation industry. The basic concepts and problems facing the industry in a straightforward and logical fashion are presented throughout each chapter.

CHANGES IN THE SEVENTH EDITION

Completely updated to reflect the challenges facing airlines in the 21st century, this text provides comprehensive, sophisticated coverage of both classic and current practices in air transportation management. The reader is guided through the ins and outs of the air transportation industry as well as through the details of management functions within airlines. This edition places greater emphasis on the global airline industry, with such topics as airline passenger marketing, labor relations, financing, and heightened security precautions integrated throughout the text. Tables, figures, statistics, key terms, review questions, and glossary terms have been added and updated.

TEACHING AND LEARNING AIDS

The substantive content of a textbook is only part of what makes it usable in the classroom; for the book to be effective, its content must be taught by instructors and learned by students. To facilitate the process, this edition continues to pay particular attention to teaching and learning aids, such as the following:

1. *Chapter outlines.* Each chapter opens with an outline of the major topics to be covered.
2. *Chapter checklists.* After the outline, each chapter includes a checklist of objectives that students should be able to accomplish on completing the chapter.
3. *Relevancy.* Most of the examples, applications, and extensions of the basic material are drawn from and apply to the air transportation environment of the 1990s.
4. *Staying power.* The text is designed to have staying power over the years. It emphasizes the underlying principles, practices, and policies that will not change appreciably over time. It is recognized that instructors will supplement the material with current, topical applications and events.
5. *Figures and tables.* Important points in each chapter are illustrated with strong visual materials.

6. *Logical organization and frequent headings.* Air transportation can easily become overwhelming in its multitude of topics, concepts, practices, and examples. The material covered here has been put in a systematic framework so that students know where they have been, where they are, and where they are going in the text. Frequent headings and subheadings aid organization and readability.
7. *Key terms.* Each chapter concludes with a list of key terms used in the text.
8. *Review questions.* Review questions at the end of each chapter address important points.
9. *Appendix and suggested readings.* One chapter includes an appendix that is of practical interest and that reinforces the material covered. A list of suggested readings is included in each chapter for students who wish to pursue the material in greater depth.
10. *Career appendix.* This edition once again includes an appendix on jobs in the air transportation field and ways to get them.
11. *Glossary of air transportation terms.* All key terms appearing at the end of each chapter, as well as many other terms used in the text and others of significance in air transportation, are included in the glossary.
12. *Complete index.* The book includes a complete index to help students find needed information.

INTENDED AUDIENCE

Because the aspirations of most students of air transportation (and, for that matter, most career paths) lead to the airline segment of the air transportation industry, the major focus of this text is on the management functions and organization of airlines. However, the significance and contribution of general aviation is not overlooked.

This book is intended for three somewhat different audiences with similar interests: students enrolled in a course such as “Air Transportation” or “Airline Management”; students in transportation and traffic management programs who wish to gain more insight into the air transportation industry because most of their classes concentrate on surface transportation modes; and individuals who work for an airline and want to gain a better understanding of managerial aspects. Too often, an airline employee, as a specialist, sees only a limited part of the overall operation and has little, if any, knowledge of such important subjects as marketing, pricing, scheduling, and fleet planning. Even individuals within marketing—reservations, for example—have little appreciation of their company’s growth strategies and market segmentation. These employees are simply too busy fulfilling the functions of the particular job description.

ORGANIZATION OF THE TEXT

The following is an outline of *Air Transportation: A Management Perspective*, seventh edition.

Part One An Introduction to Air Transportation

- Chapter 1 “The Airline Industry: Trends, Challenges and Strategies.” Chapter 1 provides the reader with a solid overview of the different stages of development impacting the airline industry alongside past, present and future trends. In addition, the main challenges and strategies are presented leading into a discussion on the new breed of airlines.
- Chapter 2 “Aviation: An Overview.” Chapter 2 introduces students to the characteristics, scope, and economic significance of the aerospace industry and its major segments—the government market and the commercial market for air transport and general aviation aircraft. The air transportation industry is clearly defined, and its contribution to the economy is discussed in depth.
- Chapter 3 “Historical Perspective.” This chapter provides a historical sketch of U.S. airlines and general aviation, including the federal legislation that has affected their growth and development. The Airline Deregulation Act of 1978 and the circumstances leading up to it are thoroughly explored. The postderegulation era from 1978 to the early 2000s is discussed, including changes in the structure of the industry and new airliners entering the market (low-cost carriers, virtual carriers, and mega-carriers).
- Chapter 4 “Air Transportation: Regulators and Associations.” This chapter discusses the roles played by the four primary federal agencies that interface with both segments of the air transportation industry: the Department of Transportation (DOT), the Federal Aviation Administration, the Transportation Security Administration, and the National Transportation Safety Board. The offices at the Department of Transportation responsible for carrying out the remaining functions of the former Civil Aeronautics Board are thoroughly explored. The purpose and major functions of the prominent aviation trade associations are also described.
- Chapter 5 “The General Aviation Industry.” This chapter concludes Part One by reviewing the general aviation industry, including its statistics and a description of widely diverse segments according to their primary use categories. Other topics include the role of general aviation airports, FAA services to general aviation, and the general aviation support industry, which, like a three-legged stool, is made up of the manufacturers, the fixed-base operators, and the users of general aviation aircraft.

Part Two Structure and Economics of the Airlines

- Chapter 6 “The Airline Industry.” This chapter reviews the current structure of the U.S. airline industry and its composite financial and traffic statistics. A complete discussion of the postderegulation expansion, consolidation, and concentration of the industry is

included. The growing role of regional carriers and new types of airlines is thoroughly discussed. This chapter also includes a section on airline certification, including types of and requirements for certification and offices within the DOT responsible for this important function. The current trend of intra-industry agreements, such as code sharing and other cooperative efforts, are described in detail.

Chapter 7 “Economic Characteristics of the Airlines.” This chapter deals with the economic characteristics of oligopolies in general and the unique characteristics of airlines in particular. Attention is also given to the economic forces in the postderegulation period that have led to such mega-carriers as American, United, Continental, and Delta. The significance of airline passenger load factors is thoroughly explored. This chapter also discusses how the industry has changed since the events of 9/11 and current global events.

Part Three Managerial Aspects of Airlines

Chapter 8 “Airline Management and Organization.” The opening chapter of Part Three introduces students to the principles and practices of airline management and organization. The different levels of management within an airline are explored, along with the functions of management planning, organizing, staffing, directing, and controlling. This is followed by a comprehensive review of organization planning and a description of a typical major air carrier’s organizational structure, including the purpose and function of various administrations and departments. Departmentalization and the need for new divisions within the organization, such as safety and security and training, are introduced.

Chapter 9 “Forecasting Methods.” Forecasting is extremely important in the management of airlines. All planning involving personnel and equipment needs is based on forecasts of future traffic and financial expectations. For this reason, this chapter naturally precedes all of the chapters relating to the other managerial aspects of airlines. The purpose of this chapter is to expose students to the primary forecasting methods used by firms engaged in air transportation.

Chapter 10 “Airline Passenger Marketing.” This chapter begins with a discussion of how the marketing of air transportation has changed over the years. The marketing mix (product, price, promotion, and place) is analyzed in depth, and the consumer-oriented marketing concept of the late 1990s and early 2000s is discussed. Various current airline marketing strategies are then explored, including such intensive approaches as gaining deeper market penetration, increasing product development, and developing new target markets. Direct marketing, computerized reservation systems (CRSs), travel agents, frequent-flier programs, business-class service, code sharing, hub-and-spoke service, and advertising and sales promotion are all highlighted.

Chapter 11 “Airline Pricing, Demand, and Output Determination.” This chapter focuses on pricing, certainly one of the most volatile of the “four Ps”

of marketing since deregulation. Subjects include the determinants of airline passenger demand and elasticity of demand. The types of airline passenger fares are discussed, followed by in-depth coverage of the pricing process, including pricing strategies and objectives, pricing analysis, and the steps involved in analyzing fare changes. The important role of inventory, or yield, management is addressed as well. This is followed by an in-depth discussion of airline operating costs, profit maximization, and output determination in the short run.

- Chapter 12 "Air Cargo." After a brief discussion of the history of air cargo in the United States, students are introduced to the importance of air express and air freight today and to the expectations for future growth in the industry. The market for air freight is then covered, including the types of air freight rates. Special air freight services are discussed, as are factors affecting air freight rates. The concept of the very large aircraft (VLA) is also discussed.
- Chapter 13 "Principles of Airline Scheduling." Unquestionably one of the most critical and yet most difficult tasks facing airline management is scheduling equipment in the most efficient and economical manner. This chapter deals with the many internal and external factors that affect schedule planning. Types of schedules are discussed, along with several examples of how a carrier goes about putting a schedule together. The chapter concludes with a discussion of hub-and-spoke scheduling and its importance in the competitive postderegulation environment of the 1980s, 1990s, and 2000s.
- Chapter 14 "Fleet Planning: The Aircraft Selection Process." The decision to purchase new aircraft is certainly one on which management expends a great deal of time and effort. This crucial decision will entail millions of dollars, and its effects will remain with the carrier for years. Students are introduced to the aircraft selection process, first from the standpoint of the manufacturer and then from the individual carrier's viewpoint. The trend toward leasing is thoroughly explored, along with the growing problem of noise restrictions on older aircraft. All of the inputs to the process are addressed, as are the criteria by which a carrier evaluates a particular aircraft. The new generation of aircraft, including the regional jet and new long-range twin-engine aircraft, are introduced. The chapter concludes with an appendix demonstrating the fleet-planning process at American Airlines.
- Chapter 15 "Airline Labor Relations." Representing over 35 percent of a typical carrier's operating expense, labor is certainly one of the most important areas of concern to management. This chapter opens with a thorough discussion and analysis of the Railway Labor Act, followed by a review of the collective bargaining process under the act. A historical sketch of airline union activity in the United States, beginning in the 1930s through the postderegulation period, also is provided. This chapter educates the reader on trends affecting future development of human resources departments. The chapter ends with an overview of the collective bargaining process in recent years and its impact on the carriers.
- Chapter 16 "Airline Financing." This chapter takes up the problem of airline capital financing. The major sources of funding are examined, followed by a discussion of the sources and the use of funds over the two decades

following the introduction of jets. The final portion of this chapter deals with funding sources in the 2000s and the important subjects of cash management and financial planning.

Part Four The International Scene

- Chapter 17 “International Aviation.” The final chapter rounds out the text coverage of air transportation by adding the dimension of international aviation. Air transportation plays a significant role in the movement of passengers and cargo between countries, and this chapter discusses how the various international conferences and conventions have shaped worldwide aviation. The last section of the chapter covers the international aviation market following the passage of the International Air Transportation Competition Act of 1979. The subjects of globalization and international airline and airport alliances are thoroughly explored.
- Appendix “Career Planning in Aviation.” This appendix provides a structured approach to the all-important subject of career planning. Students are taken through the steps of choosing and getting their first job in aviation, identifying sources of career information, developing résumés, and preparing for an interview. Included are numerous job descriptions from all segments of the aviation industry.

A NOTE TO INSTRUCTORS

Anyone who has taught courses in air transportation has surely recognized the paucity of texts on the subject. The few books that are available either are too broad in scope, resulting in a shallow overview of most topics, or examine a particular segment of the industry or phase of management in depth but with very little breadth. I have attempted to take a balanced approach, recognizing that most instructors will have their own ideas regarding the importance of the subject matter under discussion and will supplement the text with their own materials accordingly. Statistics appearing in tables and charts have been drawn from easily accessed sources, such as *Aerospace Facts and Figures*, *FAA Statistical Handbook*, and ATA annual reports, so that they can be readily updated by users of the text.

This book is designed to carry its fair share of the burden of instruction. Students using this text should not rely on you for detailed, repetitive explanations. Less class time is required to generate functional understanding of the subject, so more time is available for class discussion and the application of the material to current issues. In researching this book, I acquired a wealth of materials, most of them free, from numerous sources, including the DOT, FAA, NTSB, ICAO, ATA, RAA, and *World Aviation Directory*. The air carriers are a rich source of material that can be used to supplement your course: write to the particular department about which you are seeking information. The GAMA, AIA, ATA, and individual aircraft manufacturers can also supply a host of materials.

Another source that I have found helpful in our courses is the Harvard Business School Case Services, Harvard Business School, Boston, Mass. 02163. Some of the air transportation cases will be appropriate for your courses, and the students will enjoy them.

Suggested Outlines for a One-Semester Course

Courses in air transportation vary in content and emphasis, and so will the uses of this book. Some courses may cover the material from beginning to end; others will focus on certain sections and omit the rest. Parts One and Two offer a broad-based introduction to air transportation and should be suitable for most users. Airline management courses might focus on Parts Three and Four.

These recommendations are flexible. Other combinations are possible.

| Chapter Topic | Introductory Air Transportation Course | Airline Management course | Aviation Administration |
|--|--|---------------------------|-------------------------|
| 1. The Airline Industry: Trends, Challenges and Strategies | • | • | • |
| 2. Aviation: An Overview | • | • | • |
| 3. Historical Perspective | • | • | • |
| 4. Air Transportation: Regulators and Associations | • | • | • |
| 5. The General Aviation Industry | • | | • |
| 6. The Airline Industry | • | • | • |
| 7. Economic Characteristics of the Airlines | • | • | • |
| 8. Airline Management and Organization | • | • | • |
| 9. Forecasting Methods | | • | |
| 10. Airline Passenger Marketing | | • | • |
| 11. Airline Pricing, Demand, and Output Determination | • | • | • |
| 12. Air Cargo | • | • | • |
| 13. Principles of Airline Scheduling | • | • | • |
| 14. Fleet Planning: The Aircraft Selection Process | | • | • |
| 15. Airline Labor Relations | • | • | |
| 16. Airline Financing | | • | |
| 17. International Aviation | • | | • |
| A. Career Planning in Aviation | • | | |

A NOTE TO STUDENTS

I hear and I forget
I see and I remember
I do and I understand

—Confucius

The most effective and interesting way to learn any subject is by doing it. No professor or textbook could ever teach you all about air transportation; all they can do is help you to learn it. Much of the learning process is up to you. This text has been designed to be easy to understand. Usually, as you read the text, you won't have to struggle to get the meaning of a concept or principle. But understanding is one thing; learning something well and applying it to current events is something else.

Before starting a chapter, review the chapter outline and checklist. Take notes and highlight the major points as you proceed with your reading. After reading the chapter, see if you can accomplish the objectives listed in the chapter checklist. The review questions at the end of each chapter are also designed to bring out the most important points made in the chapter.

Become familiar with aviation trade journals and magazines. You will be surprised to see how many articles there are relating to the material discussed in class. This literature will not only enhance your own knowledge of the subject matter but also enrich your classroom experience as you discuss the material with classmates.

This is probably one of the most exciting periods in the brief history of our air transportation industry. With the passage of the Airline Deregulation Act of 1978, and the emergence of liberalization and open skies we have witnessed the emergence of a completely new structure for air transportation services in the United States and around the world. The industry stands poised for a new surge of growth. Many new career paths will surface in the next several years for those of you who have prepared for them. Good luck!