CENGIZ HAKSEVER • BARRY RENDER

SERVICE MANAGEMENT



An Integrated Approach to Supply Chain Management and Operations

SERVICE MANAGEMENT

Service Management: An Integrated Approach to Supply Chain Management and Operations

Table of Contents

$\overline{}$	<u>`</u>	n	te	'n	te
ι.	,()		16		15

Preface

Part I: Understanding Services

- 1 THE IMPORTANT ROLE SERVICES PLAY IN AN ECONOMY
 - 1.1 Introduction
 - 1.2 What Are Services?
 - 1.3 The Service Sector of the U.S. Economy
 - 1.4 Theories Explaining the Growth of Services
 - 1.5 Overview of the Book
 - 1.6 Summary

Endnotes

2 THE NATURE OF SERVICES AND SERVICE ENCOUNTERS

- 2.1 Introduction
- 2.2 General Concept of a Productive System
- 2.3 Characteristics of Services
- 2.4 The Service Organization as a System
- 2.5 Service Encounters
- 2.6 Summary

Endnotes

3 CUSTOMERS: THE FOCUS OF SERVICE MANAGEMENT

- 3.1 Introduction
- 3.2 Customers and Their Needs



- 3.3 Consumer Behavior and a Consumer Decision Model
- 3.4 Unique Aspects of Service Purchases
- 3.5 A Cultural Profile of American Customers
- 3.6 A Look into the Future
- 3.7 Summary

Endnotes

4 GLOBALIZATION OF SERVICES

- 4.1 Introduction
- 4.2 International Trade in Services
- 4.3 Why Service Companies Go Global
- 4.4 Global Environment for Service Businesses
- 4.5 Forms of Globalization
- 4.6 Summary

Endnotes

5 SERVICE STRATEGY AND COMPETITIVENESS

- 5.1 Introduction
- 5.2 Value
- 5.3 Strategy
- 5.4 Formulating a Competitive Service Strategy
- 5.5 Summary

Endnotes

6 ETHICAL CHALLENGES IN SERVICE MANAGEMENT

- 6.1 Introduction
- 6.2 What Is Ethics?
- 6.3 Is There an Ethics Problem in Private and Public Sectors?
- 6.4 Challenges for Service Employees and Managers
- 6.5 Philosophical Theories of Ethics
- 6.6 Guidelines for Ethical Business Behavior
- 6.7 Summary



Endnotes

Part II: Building the Service System

7 TECHNOLOGY AND ITS IMPACT ON SERVICES AND THEIR MANAGEMENT

- 7.1 Introduction
- 7.2 Process Technology and Information Technology
- 7.3 Technology in Services
- 7.4 Why Service Companies Invest in Technology
- 7.5 Technology as a Competitive Edge
- 7.6 Application Areas of Technology in Services
- 7.7 Information Systems
- 7.8 Enterprise Systems
- 7.9 Technology and the Future of Services
- 7.10 Summary

Endnotes

8 DESIGN AND DEVELOPMENT OF SERVICES AND SERVICE DELIVERY SYSTEMS

- 8.1 Introduction
- 8.2 Why the Design Is So Important
- 8.3 Designing Quality and Value
- 8.4 Principles of Service Design
- 8.5 Design Process
- 8.6 Summary

Endnotes

9 SUPPLY CHAINS IN SERVICES AND THEIR MANAGEMENT

- 9.1 Introduction
- 9.2 Developments Leading to the Emergence of Supply Chain Management
- 9.3 What Is a Supply Chain?



- 9.4 Supply Chains in Services and Their Characteristics
- 9.5 Some Other Characteristics of Service Supply Chains
- 9.6 Challenges for Service Supply Chain Managers
- 9.7 Summary

Endnotes

10 LOCATING FACILITIES AND DESIGNING THEIR LAYOUT

- 10.1 Introduction
- 10.2 Location Selection
- 10.3 Quantitative Methods for Location Selection
- 10.4 Site Selection
- 10.5 Objectives of Facility Layout
- 10.6 Inputs to the Layout Problem
- 10.7 Layout Strategies
- 10.8 Office Layout
- 10.9 Retail Store Layout
- 10.10 Warehousing and Storage Layouts
- 10.11 Summary

Endnotes

Part III: Operating the Service System

11 MANAGING DEMAND AND SUPPLY IN SERVICES

- 11.1 Introduction
- 11.2 Why Matching Demand and Supply Is Such a Challenge in Services
- 11.3 Managing Demand
- 11.4 Managing Supply
- 11.5 Summary

Endnotes

11 SUPPLEMENT QUEUING AND SIMULATION

S11.1 Introduction



- S11.2 Basic Queuing System Configurations
- S11.3 Measuring the Queues Performance
- S11.4 A Single-Channel Queuing Model
- S11.5 A Multichannel Queuing Model
- S11.6 More Complex Queuing Models and the Use of Simulation
- S11.7 Simulation as a Scheduling Tool
- S11.8 The Role of Computers in Simulation
- S11.9 Summary

Endnotes

12 SERVICE QUALITY AND CONTINUOUS IMPROVEMENT

- 12.1 Introduction
- 12.2 Why Quality Is So Important
- 12.3 Quality Defined
- 12.4 Dimensions of Service Quality
- 12.5 The Gaps Model of Service Quality
- 12.6 Achieving Quality
- 12.7 Other Approaches to Achieving Service Quality
- 12.8 Reinforcing Quality Service
- 12.9 Summary

Endnotes

12 SUPPLEMENT TOOLS AND TECHNIQUES OF TOTAL QUALITY MANAGEMENT

- S12.1 Introduction
- S12.2 Plan-Do-Study-Act Cycle
- S12.3 Tools of TQM
- S12.4 Process Control Charts
- S12.5 Summary

13 SERVICE PRODUCTIVITY AND MEASUREMENT OF PERFORMANCE



- 13.1 Introduction
- 13.2 A Brief Background on Productivity
- 13.3 Why Productivity Is Important
- 13.4 Review of the Slowdown of U.S. Productivity Growth in the Recent Past
- 13.5 Raising Productivity
- 13.6 Service Productivity
- 13.7 Data Envelopment Analysis for Measurement of Service Efficiency
- 13.8 Summary

Endnotes

14 MANAGEMENT OF PUBLIC AND PRIVATE NONPROFIT SERVICE ORGANIZATIONS

- 14.1 Introduction
- 14.2 Public and Private Nonprofit Organizations Defined
- 14.3 Significance of Public and Private Nonprofit Organizations
- 14.4 The Nature of Public Sector Organizations
- 14.5 The Nature of Private Nonprofit Organizations
- 14.6 Summary

Endnotes

Part IV: Tools and Techniques for Managing Service Operations

15 FORECASTING DEMAND FOR SERVICES

- 15.1 Introduction
- 15.2 The Demand Forecast as the Basis for Operations Planning
- 15.3 What Types of Service Outputs Are Forecast?
- 15.4 Factors That Affect the Choice of Forecasting Method
- 15.5 Time Series Forecasting Models
- 15.6 Causal (Associative) Forecasting; Regression Analysis



- 15.7 General Approaches to Forecasting
- 15.8 Summary

Endnotes

16 VEHICLE ROUTING AND SCHEDULING

- 16.1 Introduction
- 16.2 Objectives of Routing and Scheduling Problems
- 16.3 Characteristics of Routing and Scheduling Problems
- 16.4 Routing Service Vehicles
- 16.5 Scheduling Service Vehicles
- 16.6 Other Routing and Scheduling Problems
- 16.7 Summary

Endnotes

17 PROJECT MANAGEMENT

- 17.1 Introduction
- 17.2 Project Planning
- 17.3 Project Scheduling
- 17.4 Project Controlling
- 17.5 Project Management Techniques; PERT and CPM
- 17.6 PERT/Cost
- 17.7 Other Service Applications of PERT
- 17.8 A Critique of PERT and CPM
- 17.9 Summary

Endnotes

18 LINEAR AND GOAL PROGRAMMING APPLICATIONS FOR SERVICES

- 18.1 Introduction
- 18.2 Overview of Linear Programming
- 18.3 Graphical Solution to a Linear Programming Problem
- 18.4 Computer Solution to a Linear Programming Problem



- 18.5 Formulating Linear Programming Models
- 18.6 Goal Programming
- 18.7 Summary

Endnotes

19 SERVICE INVENTORY SYSTEMS

- 19.1 Introduction
- 19.2 Characteristics of Service Inventories
- 19.3 The Input Material Decision Problem
- 19.4 Service Inventory Control Systems
- 19.5 Inventory Control Systems for Independent Demand Items
- 19.6 Inventory Planning
- 19.7 Requirements Planning for Dependent Demand
- 19.8 Summary

Endnote

Appendix: AREAS UNDER THE STANDARD NORMAL CURVE

Index

