1. Record Nr. UNINA9910799236203321 Autore Allahviranloo Tofigh Titolo Decision Making in Healthcare Systems Pubbl/distr/stampa Cham:,: Springer International Publishing AG,, 2024 ©2024 **ISBN** 3-031-46735-3 Edizione [1st ed.] Descrizione fisica 1 online resource (440 pages) Studies in Systems, Decision and Control Series; v.513 Collana Altri autori (Persone) Hosseinzadeh LotfiFarhad MoghaddasZohreh Vaez-GhasemiMohsen Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Intro -- Contents -- Methodologies for Decision-Making in the Health Nota di contenuto and Medicine Sector -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Decision-Making Techniques in the Medicine and Health Sector -- 4 Medical Decision Making -- 5 Organizational Decision-Making in Healthcare -- 6 Healthcare Marketing -- 7 Conclusion --

References -- The Application of System Simulation in the Health Sector: A Rapid Review -- 1 Introduction -- 2 Method -- 3 Result -- 4 System Dynamic Simulation (SD) -- 5 Discrete Event Simulation (DES) --6 Agent Based Modeling (AB) -- 7 Discussion -- References -- Data Science in the Field of Health -- 1 Introduction and Motivation -- 2 Literature Review -- 2.1 Numeric Data Evaluation -- 2.2 Time Spanned Health Data Evaluation -- 2.3 Health Image Data Evaluation -- 3 Conclusion -- References -- Evaluation of Hospitals and Health Care Centers with Ratio Data -- 1 Introduction and Motivation -- 2 Literature Review -- 2.1 Non-negative Data -- 2.2 Negative Data -- 3 Ratio Data in Healthcare Management and Motivation to Use DEA-R Models -- 4 Further Managerial Implications and Applications -- 5 Conclusion -- References -- Multiple Attribute Decision Making in Ranking the Criteria in Health (with Certain and Uncertain Data) -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Smart Healthcare System Management -- 4 Ranking Healthcare Attributes

with Madm Technique -- 5 Identifying the Attributes and Subattributes for Evaluating the Performance of Smart Healthcare Management -- 5.1 Execution of Delphi Process -- 6 Ranking Healthcare Attributes with Certain Data -- 6.1 Ranking Using Dematel Technique -- 6.2 Determining the Weights of the Attributes Using the "Swara" Technique -- 6.3 Ranking of Performance Evaluation Attributes for Smarthealthcare Management Using "Waspas" Technique -- 7 Ranking Strategies.

7.1 Average Ranking Method -- 7.2 BORDA Method -- 7.3 COPELAND Method -- 8 Integration Stage -- 9 Ranking Healthcare Attributes with Uncertain Data -- 9.1 Fuzzy Sets and Fuzzy Numbers -- 9.2 Using Fuzzy DEMATEL -- References -- Healthcare Facility Location -- 1 Introduction -- 2 Facility Location -- 2.1 Covering-Based Problem --2.2 Median-Based Problem -- 2.3 Other Problem -- 3 Healthcare Facility Location -- 4 Data Envelopment Analysis -- 4.1 Ranking in DEA -- 4.2 Application of DEA on Healthcare -- 4.3 Application of DEA on Location Problem -- 5 Healthcare Facility Location Using DEA -- 5.1 Solving the Model Based on Distance Priority -- 6 Conclusion --References -- Fuzzy Transportation Model for Resource Allocation in a Dental Hospital -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Preliminaries -- 4 Fuzzy Mixed Integer Linear Programming Model -- 5 Application -- 6 Sensitivity Analysis -- 7 Concluding Remarks -- References -- Locating Problems for Medical Centers and Emergency Services -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Location -- 3.1 Location Models -- 4 Factor Evaluation Method -- 4.1 Factor Rating Method -- 4.2 Distance-Loading Method -- 4.3 Gravity Center -- 5 The Location of Healthcare and Related Service Centers -- 5.1 Location Selection of Healthcare and Service Centers Using MADM Methods -- 6 Fuzzy PROMETHEE --6.1 Fuzzy Hierarchical Analysis Process -- 6.2 Fuzzy Logarithmic Least Square Method (FLLSM) -- 6.3 Location Selection of a Healthcare Center and Its Related Health Services Among Several Proposed Locations --References -- Budgeting in Healthcare -- 1 Introduction -- 2 Moving from Focusing on Financial Accounting to Financial Management -- 3 Non-profit Organizations and Their Financial Conditions -- 4 The Necessity of Budgeting in General and Emphasizing its Need in Healthcare Environment.

5 The Importance of Management Accounting for Healthcare Managers -- 6 Necessary Financial Concepts in the Field of Healthcare -- 6.1 Expense -- 6.2 Cost, Expense and Loss -- 6.3 Classification of Costs to Direct and Indirect -- 6.4 Classification of Costs Based on Product Components -- 6.5 Classification of Costs into Product Costs and Period Costs -- 6.6 Classification of Costs Based on Cost Behavior -- 6.7 Profit Analysis Based on Activity Volume -- 6.8 Profit Margin --7 Other Terms Related to Cost -- 7.1 Cost Object -- 7.2 Cost Driver --7.3 Costing -- 7.4 Cost Center -- 7.5 Cost Pool -- 7.6 Expired Cost and Unexpired Cost -- 7.7 Opportunity Cost -- 7.8 Sunk Cost -- 7.9 Differential Cost -- 7.10 Avoidable Cost and Unavoidable Cost -- 7.11 Relevant Cost -- 7.12 Standard Cost -- 7.13 Joint Costs -- 7.14 Separable Costs -- 7.15 Mixed Costs -- 7.16 Semi-variable Costs --7.17 Semifixed (or Step Function) Cost -- 8 Budgeting -- 8.1 Prerequisites of Budgeting (Scheduling) -- 8.2 Traditional Budgeting Versus Zero-based Budgeting -- 8.3 Top-Down Budgeting Versus Bottom-Up Budgeting -- 9 Types of Budgets -- 9.1 Statistical Budget -- 9.2 Budget Based on Revenues -- 9.3 Budget Based on Expenses -9.4 Operating Budget -- 10 Budget Deviation Analysis -- 10.1 Fixed Budgets Versus Flexible Budgets -- 11 Making Decisions About Capital Investments -- 11.1 Capital Budgeting Basics -- 11.2 The Importance

Application in the Capital Investment Decision Making Process -- 12.1 Classification of Capital Projects -- 12.2 The Role of Financial Analysis in Healthcare Capital Budgeting -- 12.3 Cash Flow Forecast -- 12.4 Break-Even Point Analysis -- 12.5 Analysis of Return on Investments (ROI) -- 12.6 Net Present Value (NPV) -- 12.7 Internal Rate of Return (IRR) -- 12.8 NPV Versus IRR. 12.9 Modified Internal Rate of Return (MIRR) -- 12.10 Net Present Social Value Model -- 13 Conclusion -- References -- Sleep Disorders Detection and Classification Using Random Forests Algorithm -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Sleep Health Dataset -- 4 Experiments and Results -- 5 Conclusion -- References -- Green Supply Chain in Medicine -- 1 Introduction -- 2 Medicine Supply Chain -- 3 Green Supply Chain in Medicine -- 3.1 Sourcing in Medicine GSC -- 3.2 Manufacturing in Medicine GSC -- 3.3 Distribution in Medicine GSC -- 3.4 Disposal in Medicine GSC -- 4 Challenges/Opportunities of Medicine GSC -- 5 Conceptual Model of the Medicine GSC -- 6 Case Studies -- 7 Conclusion -- References -- Statistical Analysis and Structural Equations on Influential Parameters in Health -- 1 Introduction -- 2 Statistics -- 3 Description of Variables -- 4 Statistical Test -- 5 Statistical Methods and Assumptions -- 6 Structural Equation Modelling (SEM) -- 6.1 SEM Applications -- 6.2 SEM Approaches -- 6.3 Fitness Indices -- 6.4 SEM Softwares -- 6.5 SEM Application in Health -- 6.6 Modification Indices -- References -- Boosting Facial Action Unit Detection with CGAN-Based Data Augmentation -- 1 Introduction and Motivation -- 2 Methodology -- 2.1 Database Setup -- 2.2 Implementation Details -- 3 Experimental Results -- 4 Conclusion -- References -- Resiliency in Green Supply Chains of Pharmaceuticals -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Methodology -- 4 Analysis and Findings -- 5 Conclusion -- References -- Exploring Congestion in Fuzzy DEA by Solving One Model -- Case Study: Hospitals in Tehran -- 1 Introduction and Motivation -- 2 Preliminaries -- 2.1 DEA Models -- 2.2 Congestion -- 2.3 Fuzzy Numbers -- 3 Proposed Method -- 4 Case Study -- 5 Conclusion -- References. Performance and Managerial Ability Analysis in Health Sector: A Data Envelopment Analysis Approach -- 1 Introduction -- 2 Methodology --3 A Real Application in Healthcare System -- 4 The Impact of Contextual Variables on Efficiency Scores -- 5 Findings and Results -- References -- Mental Health on Twitter in Turkey: Sentiment Analysis with Transformers -- 1 Introduction -- 1.1 Background -- 1.2 Turkish Twitter and Sentiment Analysis -- 2 Methods -- 2.1 Background Materials -- 2.2 Data Collection -- 2.3 Sentiment Scoring -- 2.4 Model Building -- 3 Results -- 4 Conclusion -- References --Roe v Wade in Twitter: Sentiment Analysis with Machine Learning -- 1 Introduction -- 1.1 Background -- 1.2 Public Policy and Sentiment Analysis -- 2 Methods -- 2.1 Background Materials -- 2.2 Data Collection -- 2.3 Sentiment Scoring -- 2.4 Model Building -- 3 Results -- 4 Conclusion -- References -- Time Scheduling for Staff in Hospitals and Health Care Centres -- 1 Introduction and Motivation -- 2 Literature Review -- 3 Simulation Usage in Planning -- 4 ILP MODEL (Integer Linear Programming Model) -- 5 Precise and Heuristic Algorithms -- References -- Transportation Models in Health Systems -- 1 Introduction and Motivation -- 2 Literature Review -- References.

of Cash Flows from Investment -- 12 Project Risk Assessment and its