

Contents

Chapter 1. Analysis of Five Factors Influencing Road Traffic Accident Occurrence in China (1990-2018) by the Vector Autoregressive and Vector Error Correction Models.....	1
Abstract.....	1
Keywords.....	2
1. Introduction.....	2
2. Dataset.....	5
3. Method.....	6
3.1. Unit Root Test.....	7
3.2. VAR Model.....	8
3.3. VECM Model.....	9
4. Results.....	10
4.1. Unit Root Test.....	10
4.2. Johansen Cointegration Test.....	10
4.3. VECM Estimation.....	12
4.4. Impulse Response and Variance Decomposition.....	15
5. Conclusions.....	17
Funding.....	18
Data Availability Statement.....	18
Acknowledgments.....	19

Conflicts of Interest.....	19
References.....	19

**Chapter 2. Dynamic Assessment of Airport Service Quality:
A Comprehensive Approach.....25**

Abstract.....	25
Keywords.....	26
1. Introduction.....	26
2. The Evaluation Framework of Airport Service Quality.....	29
3. Dynamic Approach for Evaluating Airport Service Quality.....	30
4. Case Study.....	33
5. Conclusions.....	39
Acknowledgments.....	39
References.....	40

**Chapter 3. A Novel Group Decision Making Model for Evaluating
Airport Operational Risk Management Based on Set Pair
Analysis and Intuitionistic Fuzzy Set.....43**

Abstract.....	43
Keywords.....	44
1. Introduction.....	44
2. The Evaluation Framework of Airport Operation Risk.....	48
3. Intuitionistic Fuzzy Group Decision Making Model for Evaluating Airport Operation Risk.....	49
3.1. Basic Concepts of Ternary Connection Numbers Based on Intuitionistic Fuzzy Value.....	50

3.1.1. Conversion of Intuitionistic Fuzzy Value and Ternary Connection Number.....	50
3.1.2. Operation Rule of Ternary Connection Number.....	50
3.2. Intuitionistic Fuzzy Group Decision Making Model of Airport Operation Risk Based on Ternary Connection Number.....	51
4. Case Study.....	55
5. Conclusions.....	61
Acknowledgments.....	62
References.....	62
Chapter 4. A Hybrid-Type Indicator Set Pairs Analysis Model for Evaluating Transit Operational Efficiency.....	65
Abstract.....	65
Keywords.....	66
1. Introduction.....	66
2. The Evaluation Framework of Transit Operational Efficiency.....	70
3. Set Pair Analysis Model for Evaluating Transit Operational Efficiency....	72
3.1. Basic Concepts of Binary Connection Numbers Based on Interval Numbers.....	72
3.1.1. Conversion of Interval Number and Binary Connection Number.....	72
3.1.2. Operation Rule of Binary Connection Number.....	72
3.2. Comprehensive Evaluation Model of Transit Operational Efficiency Based on Binary Connection Number.....	73
4. Case Study.....	75
5. Conclusions.....	83
Acknowledgments.....	84

References.....	84
Chapter 5. A Hybrid-Type Multi-Attribute Decision-Making Model for the Evaluation of Uncertainties in Traffic Pollution Control Planning.....	89
Abstract.....	89
Keywords.....	90
1. Introduction.....	90
2. Literature Review.....	93
3. The Evaluation Framework of Traffic Emissions Control Efficiency.....	95
4. Comprehensive Evaluation Model of Traffic Emissions Control Efficiency.....	96
4.1. Basic Concept.....	96
4.2. Main Evaluation Process for Traffic Emissions Control with Hybrid-Type Indicators.....	98
5. Case Study.....	99
6. Conclusion.....	103
Acknowledgments.....	104
References.....	104
Chapter 6. Grey Interval Linguistic Multi-Attribute Group Decision-Making Model for Evaluating Traffic Pollution Control Plans.....	109
Abstract.....	109
Keywords.....	110
1. Introduction.....	110
2. Establishment of an Evaluating Index System.....	112

3. Pure Linguistic Multiattribute Group Decision-Making Method.....	113
3.1. Basic Concepts.....	113
3.2. Grey Interval Linguistic Variable Decision-Making Process.....	114
4. Sample Analyses.....	115
5. Conclusions.....	117
Acknowledgment.....	118
References.....	118
Chapter 7. Mountainous City Road Traffic Safety Evaluation Model Based on Composite Element Method.....	123
Abstract.....	123
Keywords.....	123
1. Introduction.....	124
2. Build Evaluation Indexes for Mountain Road Traffic Safety System.....	125
3. Mountainous City Road Traffic Safety Evaluation Model Based on Composite Element Method.....	125
4. Illustrative Example.....	129
5. Conclusion.....	131
Acknowledgments.....	132
References.....	132