## CONTENTS

	Certificate		i
	Acknowledgement Abstract		
	Cont	vi	
	List	xi	
	List	xiii	
	List of Annexures		XV
	Abb	reviations	xvi
Chapter 1	Introduction		
	1.0	Introduction	1
	1.1	Supply Chain Management	2
	1.2	Supply Chain Performance Measurement	4
	1.3	Research Questions	5
	1.4	Research Objectives	6
	1.5	Framework for Supply Chain Performance Measurement Development	7
	1.6	Motivation for Research	10
	1.7	Overview of Research Work	11
	1.8	Organisation of Project Report	14
	1.9	Conclusion	18
Chapter 2	Literature Review		
	2.0	Introduction	19
	2.1	Definition of Supply Chain Performance Measurement Systems	19
	2.2	Objectives of Supply Chain Performance Measurement Systems	20

	2.3	Desirable Characteristics of Supply Chain Performance Measurement Systems	21
	2.4	Evolution of Supply Chain Performance Measurement Systems	23
	2.5	Fundamental Processes of Supply Chain Performance Measurement Systems	27
	2.6	Performance Measures and Metrics	27
	2.7	Classification	29
	2.8	Survey of Some Most Widely Cited Performance Measurement Systems	31
	2.9	IT Tools for Performance Measurement	47
	2.10	Implementation of Supply Chain Performance Measurement Systems	56
	2.11	Success Factors	56
	2.12	Selection of Supply Chain Performance Measurement Systems	58
	2.13	Conclusion	59
Chapter 3		rmance Measurement Framework for Strategic ing in Supply Chains	
	3.0	Introduction	60
	3.1	Performance Measurement Systems and Strategy	61
	3.2	Analytical Hierarchy Process (AHP)	62
	3.3	The Balanced Score Card (BSC)	64
	3.4	Frame work for Performance Measurement of Strategic Objectives using Analytical Hierarchical Process and Balanced Score Card	65
	3.4 3.5	Strategic Objectives using Analytical Hierarchical	65 77
		Strategic Objectives using Analytical Hierarchical Process and Balanced Score Card	
	3.5	<ul> <li>Strategic Objectives using Analytical Hierarchical Process and Balanced Score Card</li> <li>The Performance Prism</li> <li>Aligning Performance Measurement Indicators with Strategic Objectives using Analytical</li> </ul>	77

Chapter 4	Supply Chain Flexibility Performance Measurement Using Fuzzy Analytic Hierarchy Process		
	4.0	Introduction	84
	4.1	Flexibility in Supply Chain	85
	4.2	Measurement of Flexibility in Supply Chain	88
	4.3	Modified Fuzzy AHP for Performance Measurement	88
	4.4	Hierarchical Model Building	92
	4.5	Pair Wise Comparison	93
	4.6	Establishing Priorities and Determining Weights	94
	4.7	Result and Discussion	98
	4.8	Conclusion	99
Chapter 5	Measurement of Flexibility and its Benchmarking Using Data Envelopment Analysis in Supply Chains		
	5.0	Introduction	100
	5.1	Measuring Flexibility Attributes	101
	5.2	Data Envelopment Analysis (DEA) for Performance Measurement	104
	5.3	Benchmarking with DEA	105
	5.4	Demonstration of Using DEA for Benchmarking Flexibility in Supply chains	107
	5.5	Result and Discussion	111
Chapter 6		ethodology and Framework for Flexibility ormance Measurement of Supply Chains	
	6.0	Introduction	116
	6.1	Framework for Flexibility Performance Measurement in Supply Chains	117
	6.2	Taxonomy of Flexibility Performance Measures	121
	6.3	Prioritising the Contribution of Flexibility Performance Measures	123

	6.4	Results and Discussion	129	
	6.5	Conclusion	133	
Chapter 7	Susta	Sustainability Performance Measurement		
	7.0	Introduction	134	
	7.1	Green Supply Chain Management (GSCM)	135	
	7.2	Green Supply Chain Performance Measurement System (Green SCPMS)	136	
	7.3	Integration of AHP with Modified BSC for Green SCPMS	140	
	7.4	Results and Discussion	149	
	7.5	Conclusion	151	
Chapter 8	Performance Measurement Framework for Reverse Supply Chain (Maintenance Management)			
	8.0	Introduction	152	
	8.1	Reverse Supply Chain	153	
	8.2	Measurement of Maintenance Performance	154	
	8.3	Performance Measures for After – Sales Service and Maintenance Unit	154	
	8.4	DEA for Maintenance Performance Measurement	157	
	8.5	Demonstration of using DEA for maintenance performance measurement and benchmarking	159	
	8.6	Results and Discussion	163	
Chapter 9	Survey of Supply Chain Performance Measurement Practices of Indian Industries			
	9.0	Introduction	167	
	9.1	Supply Chain Management: Indian Scenario	168	
	9.2	Purpose and Organization of Survey	170	
	9.3	Results and Discussion	171	
	9.4	Multivariate Analysis	181	
	9.5	Conclusion and Limitations	184	

Chapter 10	<b>Contributions, Recommendations and Conclusion</b>		
	10.0	Introduction	192
	10.1	Major Findings and Contributions	192
	10.2	Limitations of the Study	194
	10.3	Recommendations for future work	195
	10.4	Conclusion	197
	Bibliography		199
	Research publications		214
	Biodata		216