## **Contents**

1	The Classical Cournot Model				
	1.1	Introduction			
	1.2	Dynar	19		
	1.3	An In	troduction to the Analysis of Global Dynamics	26	
		1.3.1	A Cournot Duopoly Game	27	
		1.3.2	A Cournot Oligopoly Game		
		1.3.3	•••		
			Type Adjustment Process	40	
		1.3.4	Simple Basins and Critical Curves	45	
		1.3.5	Disconnected Basins		
2	Concave Oligopolies				
	2.1		uction		
	2.2	Discre	ete Time Models and Local Stability	56	
	2.3	Discrete Time Oligopolies and Global Stability			
	2.4	Gradient Adjustments			
	2.5	Continuous Time Oligopolies and Local Stability			
	2.6	Oligopolies with Continuously Distributed			
		Time Lags			
3	General Oligopolies				
-	3.1				
		3.1.1	Discrete Time Models and Local Stability		
		3.1.2			
			Models		
		3.1.3			
			Stability		
	3.2	•			
		3.2.1	Identical Speeds of Adjustment		
		3.2.2	Non-Identical Speeds of Adjustment		



4	Modified and Extended Oligopolies			
	4.1	Market Share Attraction Games		
		4.1.1 Local Stability	144	
		4.1.2 The Feasible Set and Global Stability		
	4.2 Labor-Managed Oligopolies			
		4.2.1 Discrete Time Models and Local Stability		
		4.2.2 Discrete Time Models and Global Dynamics		
		4.2.3 Continuous Time Models		
	4.3	Oligopolies with Intertemporal Demand Interaction		
		4.3.1 Discrete Time Models and Local Stability		
		4.3.2 Discrete Time Models and Global Stability		
		4.3.3 Continuous Time Models		
	4.4	Models with Production Adjustment Costs		
	4.5	Oligopolies with Partial Cooperation	194	
		4.5.1 Local Stability Analysis	200	
		4.5.2 Global Dynamics	202	
5	Mise	specified and uncertain price functions	207	
5	5.1	Misspecified Price Functions		
	5.1	5.1.1 Discrete Time Models and Local Stability	213	
		5.1.2 Discrete Time Models and Global Dynamics		
		5.1.3 Continuous Time Models		
	5.2	Cournot Oligopolies with Local Monopolistic Approximation		
	5.4	5.2.1 Adjustments with Local Monopolistic Approximation		
		5.2.2 Dynamics Under Adaptive Adjustment		
	5.3	Other Learning Processes		
	5	5.3.1 Unknown Slope with Known Market Saturation Point		
		5.3.2 Unknown Biope with Known Market Batalation Font		
		5.3.3 Unknown Slope with Known Reservation Price		
	5.4	Uncertain Price Functions		
	0	ning al Dissoft of Fature Dessare	271	
6	Uve	rview and Directions for Future Research		
A	Eler	nents of Lyapunov Theory	275	
B	Loca	al Linearization	281	
С	Niam	investible Mana and Chitical Sate	200	
C				
	<ul><li>C.1 Definitions and Simple Examples</li><li>C.2 Discrete Time Dynamical Systems as Iterated Maps</li></ul>			
	C.3	Critical Sets and the Delineation of Trapping Regions Critical Sets and the Creation of Disconnected Basins		
	C.4	Critical Sets and the Creation of Disconnected Basins		
D	Con	tinuously Distributed Time Lags	305	

E	A Determinantal Identity	
F	Stable Quadratic Polynomials	
Re	ferences	
In	dex	