Four Studies on Co-operative Firm Behaviors

in Industrial Organization

Toshikazu Kawakami

Doctoral Program in Policy and Planning Sciences

University of Tsukuba

1999

For partial fulfillment for the degree of Doctor of Philosophy in Economics, University of Tsukuba
Contents

1 Introduction 1

1.1 An Overview of the Study of Collusion ................. 1
1.2 Summary on the Following Chapters .................. 5

2 Collusion under Financial Constraints:

Collusion or Predation When the Discount Factor is near

One? 17

2.1 Introduction ........................................... 17
2.2 The Model ............................................. 18
2.3 The Possibility of Collusion ......................... 20
2.4 Conclusion ............................................. 22

3 Effects of Capacity Constraints and Concentration on the

Pricing Behavior

in Oligopolistic Industries with Demand Fluctuations 23

3.1 Introduction ........................................... 23
3.2 Model ............................................... 27
3.3 Proposition ........................................... 30
3.4 Concentration and Price Movements .......................... 38
3.5 Concluding Remarks ............................................. 40

4 Collusive Price Leadership under Repeated Games ............ 42
  4.1 Introduction .................................................... 42
  4.2 Basic Model ..................................................... 47
  4.3 Simultaneous Strategy ......................................... 50
  4.4 Leadership Strategy ............................................ 53
  4.5 Rotating Price Leadership ..................................... 57
  4.6 Divided Price Leadership ...................................... 61
  4.7 Concluding Remarks ............................................ 67

5 Gradual Collusion with Asymmetric Information on R&D Costs ................................................................. 69
  5.1 Introduction .................................................... 69
  5.2 The Model ....................................................... 71
  5.3 R&D Intensity and Evolution of Beliefs ....................... 73
  5.4 Collusion Process in the Product Market ..................... 80
  5.5 Conclusion ..................................................... 89
  5.6 Appendix ...................................................... 92
5.7 Figures ................................................. 95

References .............................................. 96