

Chapter 9 Structural Empirical Analysis of Vertical Contracting

Presented by Siyuan (Bruce) Jin and Yangfan Sun

Hong Kong University of Science and Technology

March 2025

Outline - Theory

Introduction

Basics

Non-cooperative bargaining models

- The offer game

- The bidding game

Nash-in-Nash bargaining

Introduction



Basics

- Setting
 - A upstream seller U and a downstream buyer D agree on a contract \mathcal{C} from some feasible set.
 - The contract $\mathcal{C} = \{y, t\}$, y includes other provisions and t is a lump-sum transfer.
 - Firms' payoffs: $\Pi_U(\mathcal{C}) \equiv \pi_U(y) + t$; $\Pi_D(\mathcal{C}) \equiv \pi_D(y) - t$
- Pareto efficient contract
 - $y^* \in \operatorname{argmax}_{(y,t) \in \mathcal{Y} \times \mathcal{R}} \pi_U(y) + \pi_D(y)$
 - Bilateral contracting principle: complete information and lump-sum transfers.

The offer game

The bidding game

Nash-in-Nash bargaining

Conclusion