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STRATEGIC ASPECTS OF OLIGOPOLISTIC VERTICAL INTEGRATION

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PREFACE

The purpose of this book is to present a unified treatment of some fundamental issues concerning the strategic impact of vertical integration in an oligopolistic setting. The book is divided into two parts: Part I consists of chapters 1 to 4, while Part II consists of chapter 5. Part I contains a systematic analysis of oligopolistic vertical integration when all firms have the objective of profit maximization. Part II discusses the issues of vertical relations in a mixed market, where firms pursue asymmetric objectives. In addition to these two parts, an Introduction chapter provides a brief review of the related literature and research methodology. A General Conclusions chapter at the end, summarizes the results and discusses their major implications and possible extensions.

In Part I, an analytical framework is introduced, which combines market transactions, supply contracts and vertical integration. By exploring a two-stage Cournot game, it is demonstrated, that vertical integration is the Nash equilibrium that applies in both the fixed input proportion model and the variable input proportion model. Although vertical integration reduces total profits of individual firms, the competing firms must integrate vertically. The reason is that the underlying game has the structure of *prisoners' dilemma.*

Part I also shows that vertical integration leads to a higher social welfare than other alternative vertical structures, such as market transactions, supply contracts and mixed integration. The total effect of vertical integration is separated into the anti-competitive effect of market elimination and the pro-competitive effect of pure vertical integration. The former can be represented by an exclusive contract as a type of vertical restraint. When the pre-integration vertical structure is characterized as a supply contract, the market elimination effect is absent. Hence, vertical integration process creates only the pure vertical integration effect. Distinguishing market transactions and supply contracts as two alternative pre-integration arrangements has important policy implications. When an anti-trust authority reviews a vertical integration case, attention should be paid not only to the vertical integration, but also to the pre-integration vertical arrangements in a specific industry.

The significance of public enterprises in some Western European economies, and the trend of economic transitions toward a market system in Eastern Europe,

justify the efforts to analyze the vertical relations in a successive oligopoly when firms have asymmetric objectives. The existence of public firms with the objective of welfare maximization, in an industry otherwise characterised as a successive oligopoly, creates a mixed market. Subsequently, asymmetry in downstream firms' objectives, leads to a higher output of final products than when all firms have the objective of profit maximization. Moreover, competition between suppliers of intermediate goods intensifies.

Asymmetry in firms' objectives may also be one of the reasons for the existence in cost differences between public and private firms. It is shown that, although public firms typically pay more than private firms in equilibrium, the intermediate input prices become lower for both types of firms in the downstream industry. It is further shown that the active participation of a public firm, e.g. acting as a Stackelberg leader, proves to be a more effective way to control the successive oligopoly than by acting passively as a Cournot player or as a Stackelberg follower. An interesting result is that the profits of downstream private firms may increase when they act as a Stackelberg follower in such a game. A second-mover advantage of private firms helps to create a *win-win* situation for downstream firms as the result of erosion of market power of the upstream firms.

The implications of these contributions suggest that in an oligopolistic industry where firms have symmetric objectives, vertical integration may strengthen a firm's competitive position through strategic interactions. In industries characterised as mixed oligopolies, private firms may be better-off by taking a low profile and acting as followers. Public firms in mixed oligopolies may instead act as leaders by positively influencing the outcome of successive oligopolies in order to improve social welfare.

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