



Intimidating competitors — Endogenous vertical integration and downstream investment in successive oligopoly[☆]

Stefan Buehler^{a,b,c,*}, Armin Schmutzler^{a,c,d}

^a University of Zurich, Socioeconomic Institute, Bluemlisalpstr. 10, 8006 Zurich, Switzerland

^b WU Wien, Research Institute for Regulatory Economics, Nordbergstr. 15, 1090 Vienna, Austria

^c ENCORE, The Netherlands

^d CEPR

Received 27 July 2005; received in revised form 4 August 2006; accepted 20 November 2006

Available online 16 January 2007

Abstract

This paper examines the interplay of endogenous vertical integration and cost-reducing downstream investment in successive oligopoly. Analyzing a linear Cournot model, we establish the following key results: (i) Vertical integration increases own investment and decreases competitor investment (intimidation effect). (ii) Asymmetric integration is a non-degenerate equilibrium outcome. (iii) Compared to a benchmark model without investment, complete vertical separation is a less likely outcome. We argue that these findings generalize beyond the linear Cournot model under reasonable assumptions.

© 2006 Elsevier B.V. All rights reserved.

JEL classification: L13; L20; L22

Keywords: Vertically related oligopolies; Investment; Vertical integration; Cost reduction

[☆] We are grateful to the editor, Roman Inderst, for many detailed comments and suggestions. We also thank two anonymous referees, Zava Aydemir, Ernst Fehr, Wolfgang Gick, Rachel Griffith, Michael Kosfeld, Tauno Lörtscher, Stephan Meier, Thibaud Vergé, Achim Wambach and seminar audiences at Berne (SSES), Boston (IIOC), Helsinki (EARIE), Koblenz (Industrieökonomischer Ausschuss), Madrid (EEA-ESEM), Leuven (CEPR), Nuremberg, Swansea (RES), St. Gallen and Zurich for helpful comments on this paper and a precursor (“Vertical Integration and Horizontal Expansion”).

* Corresponding author. University of Zurich, Socioeconomic Institute, Bluemlisalpstr. 10, 8006 Zurich, Switzerland.
E-mail addresses: sbuehler@soi.unizh.ch (S. Buehler), arminsch@soi.unizh.ch (A. Schmutzler).

1. Introduction

Understanding strategic behavior in successive oligopoly is an important objective of industrial organization. A substantial literature has highlighted the links between vertical market structure and pricing in successive oligopoly.¹ The relation between vertical market structure and cost-reducing investments has received comparatively little attention.² In the present paper, we argue that the interplay of endogenous vertical integration and investment decisions is crucial for our understanding of strategic behavior in successive oligopoly. In particular, we show that a firm's vertical integration generates what we call an "intimidation" effect, that is, vertical integration decreases cost-reducing investment by competitors. There is thus a strategic motive for vertical integration that has gone unnoticed in the previous literature. Incorporating endogenous investment decisions into successive oligopoly models also allows us to shed new light on the analysis of equilibrium industry structure and the relation between industry structure and performance, two key issues of the literature on endogenous vertical integration in successive oligopoly.

Our analysis first shows how vertical market structure affects the cost-reducing investments of individual firms. We then use the insights from this analysis to show how vertical structure and cost-reducing investments are determined as jointly endogenous by more primitive variables, such as market size and investment costs. To this end, we consider a simple linear Cournot model in the tradition of Salinger (1988), which we modify to include both endogenous integration and investment decisions.

In this model, two downstream firms face two vertically-separated upstream suppliers. To produce one unit of the final product, downstream firms require one unit of an intermediate good produced by upstream firms. Downstream marginal costs consist of the costs of obtaining the intermediate good plus the costs of transforming the intermediate good into the final product. The timing of the game is as follows. In stage 1, downstream firms decide whether to integrate backwards by acquiring a supplier at fixed cost, thereby getting access to the intermediate good at marginal cost.³ Three conceivable vertical structures can emerge from this stage. Under *integration*, there are two integrated supply chains, whereas under *separation*, there are two separated downstream firms buying the input from two upstream firms. Finally, there is the intermediate case of *asymmetric integration* with an integrated and a separated downstream firm. In stage 2, downstream firms can invest into reducing the costs of transforming the intermediate good into the final product, thereby increasing their transformation efficiency. In stage 3, the wholesale price at which the input good is sold to downstream firms is determined. In stage 4, product market competition takes place.

We first examine the relation between vertical market structure and cost-reducing investment, holding vertical market structure fixed. Our main results for this setting are the following. First, under asymmetric integration the integrated firm invests more into cost reduction than the separated competitor. Second, comparing two structures which differ only with respect to one firm's integration decision, we find that a firm's integration leads this firm to invest more and the competitor to invest less. The latter effect on the competitor—the intimidation effect of vertical

¹ Contributions to this literature include Ordovery et al. (1990), Hart and Tirole (1990), Gaudet and Long (1996), Abiru et al. (1998), Chen (2001), Elberfeld (2001, 2002), Jansen (2003), Linnemer (2003), Dufeu (2004), and Buehler and Schmutzler (2005).

² Notable exceptions include Banerjee and Lin (2003) and Brocas (2003).

³ The assumption of fixed integration costs is a simplification that we shall discuss in some more detail below.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات