International Journal of Industrial Organization
19 (2001) 1583–1602

International Journal of Industrial Organization

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Non-price strategic behavior: the case of bank branches

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Received 19 December 1999; received in revised form 15 February 2000; accepted 26 February 2000

Abstract

We perform an empirical study of banks' branching decisions as a strategic non-price variable in an oligopolistic setting. Using panel data of banks from Norway, we find clear evidence that banks act strategically in their branching decisions, taking into consideration the future response from rival banks. The analysis is applied to a unique data set which covers the entire banking sector during both pre- and post-banking crisis periods, where very different types of conduct are found in each of these periods both for banks and borrowers. Moreover, we find that a bank specific branch-network does not confer externality on other banks. As a result branch network affects only market shares but not market size.

JEL classification: G21; L13

Keywords: Bank branch networks; Oligopolistic setting; Borrowers; Norway

1. Introduction

This article is concerned with two important non-price aspects of conduct among firms in an oligopolistic setting: (i) the existence and effects of informational externalities on conduct, and (ii) the impact of changes in sectoral

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0167-7187/01/$ – see front matter
PII: S0167-7187(00)00064-3

fundamentals on conduct. These issues are addressed in the context of the branch-banking firm in the provision of loans.

To date, existing empirical research pertaining to the economic performance of oligopolistic banking markets has increasingly focused on the role of banks' behavior in determining market outcomes. These empirical studies of bank conduct have relied on either price or quantity (Nathan and Neave, 1989; Shaffer, 1993; Berg and Kim, 1994, 1998). Some recent theoretical banking studies, however, discuss the importance of non-price (the branch network) competition and its effects on banking markets. See for example Degryse (1996) and Matutes and Padilla (1994). In oligopolistic or oligopolistically-competitive markets, non-price considerations may be the most important tool by which firms differentiate themselves and extract market power.

Recently, several empirical studies have dealt with the issues concerning banks' optimal branch-network. Two of these studies model branches as a strategic variable in the market for deposits, in order to study the impact of deregulation in some European countries (Cabral and Majure, 1994; Cerasi et al., 1997). Barros (1995) studies the growth of bank branches in Portugal. However, he follows a partial equilibrium approach where banks are assumed to make independent (branching) decisions. In a later study Barros (1999) analyzes pricing decisions (only) and investigates aspects of product differentiation induced by (exogenous branch) location in local markets. These studies focus on the deposits market.

In the present article we depart from the above studies in two respects. Firstly, we consider the role of the branch-network in the provision of loans. This is based on the view that information collection and processing lie at the heart of banks' operation and is reflected in an increasing number of theoretical contributions. See for example Diamond (1984), the articles in Mayer and Vives (1993) and Freixas and Rochet (1997).[1] Secondly, we estimate a model of branching decision where banks explicitly take account of both their own existing network and their expectation of rival's choices.

One of the main features of the institutional structure that facilitates the creation and processing of information may be attributed to the branch network. By introducing branches in a certain geographical area banks can better obtain and process borrower-specific local information, and thus maintain the quality of their loan portfolio. In fact, as has been recently documented by Jayaratne and Strahan (1996), relaxation of the US branching regulation has been an important source of increase in the rate of real per capita growth in income and output. This growth is shown there to have emanated from improved loan monitoring and screening which was the result of the branch network proliferation. An earlier paper by

[1] Other contributions are those of Leland and Pyle (1977), Allen (1985) and Chan et al. (1986). An earlier empirical paper by Mester (1992) estimates a cost function based on information-theoretic considerations, and where outputs are categorized according to their required monitoring intensity, though no strategic aspects are present in that study.