



ELSEVIER

Information Economics and Policy 13 (2001) 199–230

INFORMATION
ECONOMICS
AND POLICY

www.elsevier.nl/locate/econbase

Liberalisation, industry turmoil and the balance of R&D activities[☆]

Mario Calderini^{a,*}, Paola Garrone^b

^a*Politecnico di Torino, DSPEA, Scuola Politecnica in Economia ed Organizzazione
'Wilfredo Pareto', Corso Duca degli Abruzzi 24, 10129 Torino, Italy*

^b*Politecnico di Milano, Dipartimento di Economia e Produzione and CIRET,
Piazza Leonardo da Vinci 32, 20133 Milano, Italy*

Abstract

In this paper we investigate the relationship between market structure and the composition of R&D activities. We present an empirical model to demonstrate that when market structure is shuffled by an institutional discontinuity, such as liberalisation, basic and applied activities respond in opposite ways: the former decrease whereas the latter increase. As a consequence, market turmoil is likely to provide firms with short-term incentives, shifting the allocation of resources towards applied and development activities. The model is tested on an original data set including innovation measures from the incumbent Public Telecommunications Operators of 17 European countries. We argue that the dynamics outlined in the model are likely to prevent firms (industries) sustaining an appropriate rate of innovative activity. © 2001 Published by Elsevier Science B.V.

Keywords: Market structure; R&D; Liberalisation; Basic and applied research; Telecommunications

JEL Classification: L1; L96; O31

1. Introduction

Over the last decade, European telecom markets have eventually started their processes of liberalisation. The old monopolies of Public Telecommunications

[☆] Previous versions of this paper were presented at the Schumpeter Society Conference, Manchester, June 28–29, 2000, and at the ITS Conference, Buenos Aires, July 1–5, 2000.

* Corresponding author. Tel.: +39-011-564-7235; fax: +39-011-564-7299.

E-mail address: calderin@athena.polito.it (M. Calderini).

Operators (PTOs) have systematically been replaced by liberalised markets, in which domestic and foreign investors are striving hard to establish and consolidate their market positions.

The vast majority of OECD countries are now well ahead in the process of market liberalisation and the debate about the effects of competition has reached its peak. Very many of the arguments tend to support the idea that the net effect of the institutional change will be positive, both socially and for the incumbent firm. Nevertheless, there also seems to be a widespread awareness about the existence of potential sources of market failures, as witnessed by the ever-increasing regulatory activity performed by national authorities. Among the controversial issues, the debate about the actual suitability of market incentives to generate and sustain an appropriate rate of technical progress within the country has until now occupied a relatively marginal position. The crucial question is how, and how much, firms' R&D expenditure profiles will be affected by institutional transition generating industry turmoil, both in terms of total amount and in terms of composition. This paper focuses on the latter issue, that is, on the effects of liberalisation on the balance between basic and applied R&D.¹

In this section we will report some of the prominent concerns that have been expressed by many policy experts all over the world on the fate of industrial basic research; to this end, we will briefly review some anecdotal evidence about firms' basic research strategies, in order to stress the relevance that such an issue might assume in the near future. The review is intrinsically biased towards the US experience, given the fact that that market is well along the way of market liberalisation.

1.1. Recent trends in basic research

A recent report from the National Institute for Science and Technology stresses that, in the mid-nineties, the IT sector invested in R&D activities an amount that represents between 21 and 35% of all private R&D investment in the US (NIST, 1996). Nevertheless, several of the largest IT industrial R&D laboratories have undergone severe downsizing and have focused their remaining research efforts on supporting shorter-term development goals. Estimates for the IT industry indicate that 6–9% of R&D expenditure goes towards long-term basic research. The report is pretty clear about the determinants of this trend: support for basic research is shrinking as profit margins erode due to intense global competition in products with shorter lifecycles.

These comments are reinforced by the vision expressed by Gregory Tasse² in a

¹ We refer to the dichotomy basic/applied research, which should be considered equivalent to alternative dichotomies used by other authors such as research/development, fundamental/applied research. See Section 2 for a definition.

² Tasse² is the Director of the Office of Strategic Planning and Economic Analysis, NIST.

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