Intellectual property protection mechanisms in research partnerships

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Abstract

A set of US-based companies is investigated regarding the effectiveness of intellectual property protection mechanisms (IPPMs) in the formation of research partnerships. Patents are the most frequently used IPPM to protect both background and foreground knowledge in partnerships. Other IPPMs are used to protect know-how, especially in the early, forming stages of a partnership. Existing IP titles are quite useful when negotiating new partnerships. IPR negotiations are reported to be more complex in horizontal partnerships and when universities are involved.

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1. Introduction

Research partnerships involving firms, universities and, less often, government agencies have grown in numbers and in importance in most industrial nations. This nearly two-decade old phenomenon is the result of a number of factors including, but not limited to, the complexity and speed of technical advance and the globalization of the world economy. Public policy has shifted over this period, especially in the United States, from discouraging such relationships on antitrust grounds, to encouraging new research joint ventures (RJVs) by modifying antitrust regulations.1 The Department of Justice and the Federal Trade Commission (FTC) have adopted specific guidelines for companies to receive limited indemnification should antitrust issues arise during partnership activities.2

Research partnerships are complex organizational arrangements. They take many forms ranging from infrastructures to support the informal sharing of information among partners to the creation of entirely new research entities. Some include large numbers of firms joining together to set industry standards. Others are truly one-on-one research ventures with specific technological goals. Still others are specific product-focused partnerships with either customers or suppliers aimed at solving a particular problem and thereby generating more business with just one other firm.

Intellectual property protection mechanisms (IPPMs) — such as patents, copyrights, trademarks and trade

1 Herein we use the terms research partnership and research joint venture (RJV) interchangeably. For a discussion of trends in RJV activity and legislative initiatives to encourage RJV formations, see Hagedoorn et al. (2000).

2 Many RJVs are not registered with the Department of Justice since firms make preliminary decisions as to the potential antitrust exposure before filing.
Existing IP titles – especially patents – are reportedly crucial in the early, negotiating stages of a partnership. To protect know-how and tacit knowledge, especially trade secrets, are also used extensively in research partnerships. The samples of surveyed and interviewed firms include large, diversified US-based companies. While there is strategic variation among firms regarding the way they approach the issue of IPRs in research partnerships, our evidence does not, however, indicate that this has been an issue presenting insurmountable problems for large, diversified companies.

This paper presents a set of results from a multi-year, multi-faceted project on IPPMs. It describes findings from a sizeable set of firms that were investigated with regard to their assessment of the role and effectiveness of IPPMs used in the formation and execution of research partnerships. The samples of surveyed and interviewed firms include large, diversified US-based companies.

All in all, our findings confirm the view that resolving issues of IP protection is a fundamental consideration for all partners. While there is strategic variation among firms regarding the way they approach the issue of IPRs in research partnerships, our evidence does not, however, indicate that this has been an issue presenting insurmountable problems for large, diversified companies.

In the area of R&D specifically, these costs may be high due to asset specificity and spillovers resulting in incomplete contracts and the possibility of opportunistic behaviour. Theory predicts that in order to circumvent opportunism, the more specific assets are and the more costly contracts are, the greater the incentive to integrate. Integration may, however, also entail costs in terms of rigidities, the more so the more valuable flexibility is in a particular industrial/technological set up. Theory thus concludes that intermediate forms of organisation – hybrid governance structures – will be efficient under such conditions.

Economic theory places intellectual property (i.e. knowledge) at the heart of its appraisal of collaborative R&D. Both transaction costs and mainstream industrial organisation theory consider the particular characteristics of technological knowledge – a latent public good whose creation and productive use are characterised by uncertainties – to be deterministic of both the incentives to form a research partnership and the economic impacts of such an association.

The explanation of RJVs provided by transaction-cost theory is straightforward. Joint ventures are considered hybrid forms of economic organisation (Williamson, 1996) that aim at economising on transaction costs. In the area of R&D specifically, these costs may be high due to asset specificity and spillovers resulting in incomplete contracts and the possibility of opportunistic behaviour. Theory predicts that in order to circumvent opportunism, the more specific assets are and the more costly contracts are, the greater the incentive to integrate. Integration may, however, also entail costs in terms of rigidities, the more so the more valuable flexibility is in a particular industrial/technological set up. Theory thus concludes that intermediate forms of organisation – hybrid governance structures – will be efficient under such conditions.

Jaffe's (2000) review emphasises by omission the void of information about patents, much less other mechanisms, as a means to protect intellectual property in a collaborative research setting.
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