"Explaining cross-border technological alliances: Evidence from the global tire industry"

Abstract

Increasingly over the last decades, due to the process of globalization and technological sophistication, firms are turning to collaborative agreements as a significant source of competitive advantage. In this paper I explore the horizontal dimensions of such technological agreements within the tire industry between 1987 and 1997. While most of conclusions of the literature on technological alliances are drawn from studies of high-tech industries (e.g. electronics, IT, computers) I am interested to test their findings and enunciate new theories valid for mature and low-tech industries. Moreover, these results are especially significant for firms from developing countries in a North-South context of technology transfer. The tire industry is attractive in this way for several reasons. First, it has a wide representation in terms of producing countries as opposed to high tech sectors that are highly concentrated in industrialized nations. Secondly, both process and product innovation occurs also in low-tech industries and technology has been crucial in the tire industry driven many of the shake-outs and consolidation processes over time. Our dataset includes data on firms worldwide at the plant level and the technological agreements between them. By comparison, in 1987 there were 207 producers, 342 plants and 70 agreements while in 1997 there were 304 producers, 458 plants and 96 technological pacts. My research objectives include explaining the propensity to engage in a technological alliance, the main determinants of such agreements and the form of this alliance. I have three main research questions from which I derive testable hypotheses regarding who provides the technology, what form do these agreements take, and who are the receivers. For explanatory variables I include firm- and countryspecific factors for both the providing and the recipient firm.