

# Chapter 11

## Motives for International Inter–Firm Cooperation on R&D and Innovation: Literature Overview and Recent Trends

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### **ABSTRACT**

*International inter-firm cooperation for technological purposes increased substantially in the last four decades with the emergence of patterns of globalization of R&D and innovation. Motives and firms' decision-making process to cooperate internationally are considered crucial aspects for successful inter-firm technological collaboration. This chapter reviews and summarizes the principal theoretical perspectives and trends on this issue from 1980 to 2012. Rather than focusing only on the motives of two-firm partnerships, there is a shift in literature in the last decade towards the analysis of how embedded firms are in social networks and divergence of motives related to the influence of multiple stakeholders. Furthermore, research attention paid to motives for technological cooperation is decreasing due, in part, to the decline experimented in manufacturing and R&D areas over the 1990s, the rapid increase in cross-border strategic alliances in business services, and complexities associated with the emergence of mixed modes of innovation.*

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## INTRODUCTION

Cooperation for technological purposes increased substantially after 1970 with the emergence of patterns of globalization of R&D and innovation (Porter and Fuller, 1986; Granstrand et al., 1993; Niosi, 1999; Hagedoorn and Lundan, 2001; Archibugi and Iammarino, 2002; Van de Vrande et al., 2009; OECD, 2008, 2010). Alliances have become an important vehicle for keeping up with unceasing and turbulent technological change, even though average alliance success rates remained poor (Man and Duysters, 2005). An ample literature shows that technological alliances among Triad countries (United States, European Union countries and Japan) grew 170% between 1980 and 1998 (Hagedoorn, 2002; Narula and Duysters, 2004). In the mid-1990s, the 50 largest R&D spenders worldwide account for a considerable share of total R&D input in each of the triad nations, thus indicating the importance of international R&D activities carried out by multinational companies (Gassmann and von Zedtwitz, 1999; OECD, 2010). Although knowledge creation processes have become increasingly global, yet remain limited to a relatively small number of countries in the world and the propensity to collaborate on innovation with partners from abroad varies widely amid countries. Among firms in Europe, for example, the share of collaboration involving partners in a different country ranges from less than 2% in Italy, Romania and Spain to over 12% in Denmark, Finland and Belgium (EUROSTAT, 2010). Ernst (2005), Idris and Seng Tey (2011) and Schmiele (2012), referring to the majority of developing countries, affirm that inter-national cooperation stays practically un-investigated.

In this context, this chapter focuses on a key aspect on R&D and innovation inter-firm relationships: motives that drive firms to engage in technological cooperation activities. Motives to cooperate combined with the nature of the co-

operation agreement and the prevailing market conditions are crucial aspects related to successful of inter-firm technological collaboration. Nielsen (2010) maintains that different motives may lead to strategic misfit which, unless resolved through mutual adaptation, is likely to negatively influence alliance outcome. Beamish and Delios (1997) state that partner motives affect each other in determining co-operation dynamics and knowledge outcome and, consequently, alliances often exhibit instability and poor performance. Despite an ample research on inter-firm cooperation, the conceptualisation of motives for and effects from collaborative R&D and innovation remains poor and empirical evidence scattered (Man and Duysters, 2005). This chapter reviews theoretical perspectives and recent trends on this issue, exploring the rationale and strategic motives underlying firms' engagement in cooperation for R&D and innovation activities. Our research questions are:

- What motivate firms placed in different countries to engage in technological cooperation relationships?
- Which are the theories and theoretical constructs that explain motives for international inter-firm cooperation on R&D and innovation?

The chapter is organized as follows: Firstly we present a definition of international inter-firm cooperation on R&D and innovation, as conceptual framework for our literature review. Secondly, we exhibit the methodology applied. Thirdly, we summarize the principal theoretical strands and recent trends. Then we comment empirical evidence obtained from a study realized with Argentinean and Spanish firms (Edwards-Schachter et al., 2011; Edwards-Schachter et al., 2013) considering the 'two sides' of technological collaboration (Lawton et al., 1991; Arvanitis, 2012). Finally, we conclude and suggest further research questions.

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