

**Competence accumulation and collaborative ventures: evidence from the largest  
European electronics firms and implications for the EU technological policies**

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II draft: Milan, September 2000

**Abstract**

This paper analyses the association between inter-firm collaborative agreements and the technological capabilities of the largest European electronics firms between 1984 and 1997. To this purpose we collected information about 2,240 R&D agreements sponsored by the EU and 1,970 non sponsored agreements signed by the sample firm. We classified agreements into fourteen industrial sectors by using cluster analysis.

Moreover, we selected the most important fourteen technological classes for the sample firms in the period 1984-1996 and for each class calculated the sample firms' share in world patent applications. We analysed the effects of agreements on firms' technological capabilities measured by patent shares.

Our analysis shows that non-sponsored agreements have significant effects on the technological capabilities of the firm. However, only agreements with extra-European (US and Japanese) partners produce significant effects on the technological capabilities of the firm. Finally, EU-sponsored agreements have insignificant effects on technological capabilities. These results indicate that there is a weak complementarity among European electronics firms and suggest that a reshaping of EU policies towards collaborative R&D is required.

**Key words:** inter-firms alliances, innovation, technological capabilities, electronics

**JEL:** L21, O32, O38, L63



