



## **University-Industry Networks in the Wine Industry: Comparing Chile, South Africa and Italy**

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### **Abstract**

Universities are increasingly considered central actors in the process of economic development of countries and regions. If it is true that university-industry (U-I) linkages are not per se a recent phenomenon (Etzkowitz, 1998), it is equally true that these linkages have considerably increased in the recent past. This may be due to an increasing trans-disciplinarity of the knowledge production process, which requires tight interaction between science and technology (Faulkner, 1994), as well as to the policies that both in the US and in Europe – and now increasingly more in developing countries – are promoting the interaction of public research institutions with industry (Geuna, 2001; Velho and Saenz, 2002; van Looy et al., 2003; see also, Mowery et al., 2001).

This higher involvement of universities with industry has been accomplished through a set of different mechanisms and channels of interaction (Bonaccorsi and Piccaluga, 1994). These range from informal meetings, to consultancy work commissioned by the industry and not involving original research, collaborative research and joint research programmes to, finally, the licensing of university patents or the purchase of prototypes developed by the industry (Schartinger et al. 2002; D'Este and Patell, 2005). Scholars have noted that there are differences in the way and intensity universities interact with the industry, depending on several factors. Sectoral differences do certainly play a role in this, as the interaction between university and industry is facilitated by the applied nature of the underlying research, and it tends to be higher in fields like Agronomics, Engineering or Life Sciences than in Physics or Mathematics. The wine industry is one such industry, having undergone a process of technological change and modernization that makes applied research more important than in the past, and where the interaction between science and technology has become fundamental to spur changes in the industry.

Beyond sectoral differences, the literature has shown that several factors influence the formation of U-I linkages, which depend both on the characteristics of individual researchers as well as on those of the departments or research labs where they work (D'Este and Patell, 2006). Following on this literature, this paper explores the factors that affect the formation of U-I networks, considering some key features of university researchers – age, previous experience, career, position and reputation in the academia, etc. - and of their departments – type of research funding, geographical distance from the industry, etc. It compares U-I networks in the Chilean wine industry with those of another emerging country in the production of wine (South Africa) and with an old, traditional producer, such as Italy (Piedmont). The study is based on original survey data collected in the three countries in the period October 2005-October 2006. The empirical analysis uses a combination of social network analysis and econometrics methods.