Comparative Efficiency of Producer Co-Operatives and Conventional Firms in a Mixed Sample of Winemaking Companies.

BRANDANO Maria Giovanna, DETOTTO Claudio, VANNINI Marco
University of Sassari, IT
mgbrandano@uniss.it, detotto@uniss.it, vannini@uniss.it

We investigate the comparative technical efficiency of work-owned firms (WO) and conventional firms (CF) by looking at the performance of a mixed sample of Sardinian wine producing companies over the period 2004-2009. The Sardinian wine industry provides a unique laboratory for this kind of comparative analysis, which in the absence of definite theoretical statements and uncontroversial empirical evidence on the effects of organizational form on productivity continues to attract the attention of many researchers. Among the factors that bias productivity estimates in this area, scholars have emphasized the self selection problem (due to the tendency of successful PC’s to exit the sample); the heterogeneity of accounting practices and a host of uncontrollable aspects, even for the same type of firms, when the samples under investigation cover several industries. Thanks to a reformulation of the income statement of the firms included in our dataset, we have been able to measure uniformly the magnitude of the labour input across firm types. Moreover, since all the firms considered were established well before the period under study, self selection biases are significantly reduce. Finally, being all the firms located in the same region, i.e. within the same social, productive and natural environment, one can safely assume that our units of observations are “twins” in all non-organizational aspects, e.g. technology, products and market conditions.

Based on this sample, we first measure the technical efficiency of the firms by applying the non parametric DEA (Data Envelopment Analysis) method. Subsequently, we run a pooled truncated maximum likelihood regression in order to estimate the impact of environmental and firms’ characteristics on the technical efficiency indicators. We test carefully for the robustness of our two-stage bootstrap procedure. On average, the cooperative wineries are less technically efficient than conventional firms.

Based on this sample, we first measure the technical efficiency of the firms by applying the non parametric DEA (Data Envelopment Analysis) method. Subsequently, we run a pooled truncated maximum likelihood regression in order to estimate the impact of environmental and firms’ characteristics on the technical efficiency indicators. We test carefully for the robustness of our two-stage bootstrap procedure. On average, the cooperative wineries are less technically efficient than conventional firms. These findings go against previous empirical analysis in this area (particularly for the wine industry) and, owing to the key role of work-managed firms in the rural world of many European countries, raise concerns about the likely effects of the forthcoming liberalization of the EU wine sector.