In vino qualitas: climate change effects on Italian wine production

Luciano Canova¹, Giovanni Marini, Maria Chernyavskaya, Michele Dallari Enrico Mattei School, Italy.

(May 2011, Final Version: March 2012)

Abstract

In viticulture, climate conditions prove to be a crucial driver in what regards quality of vintages. Understanding to what extent the predicted variability of these parameters could affect wine production in the future, creates ground for efficient assessment of appropriate mitigation and adaptation measures and guarantees the further sound development of wine industry. Our study analyzes the relationship between meteo-climatic conditions expressed by Huglin Index and precipitation during growing season- and wine ratings of the three of the most representative Italian Wines, namely Amarone, Barolo and Brunello. Resulting coefficients of a panel data regression are used in a dynamic model aimed at forecasting the quality of harvests through to 2050.

JEL classification: Q54, Q10. **Keywords**: climate change, wine quality, system dynamics.

¹Corresponding author: luciano.canova@enicorporateuniversity.eni.it. Enrico Mattei School. We thank Prof. Alessandro Corsi (Università di Torino) for his really kind help and Prof. Maurizio Maugeri (Dipartimento di Fisica Applicata, Università Statale di Milano) for the provision of climate data.