In this paper I have studied the extent to which different variables affect the way individuals make decisions in the Ultimatum game and the Dictator game. To do so, I have made a questionnaire in which different students of the Public University of Navarre and teachers of an English academy had to play these two games. I have focused on the study of three different variables: the gender, age and type of studies of the subjects in my sample. What I found was that the gender of the subjects in my sample was the only significant variable affecting the decisions: females offer to keep for themselves, on average, a lower percentage of the pie than males in both games. Finally, the rest of the variables studied in my questionnaire were not significant.