

Abstract

This paper elucidates how predictions in the depth of reasoning model, special cases of which include the Level-k and Cognitive Hierarchy models are robust to the common knowledge assumption of level-0 players' actions in two-player case. A prediction of the model is said to be p -dominant if level-0 players play a p -dominant action pair in the prediction. A sufficient condition is provided for a p -dominant prediction being robust to incomplete information *à la* Kajii and Morris (1997). Depending on assumed players' decision rules, even a p -dominant prediction with $p \geq 1/2$ can be robust. A key mechanism behind this result is the effect of players' limited depth of reasoning on their strategic interaction through higher order beliefs, which is implied by Strzalecki (2010) in the case of Rubinstein's (1989) email game.