Abstract

A simple theory is presented demonstrating that the presence of complementarities in a production function can lead to positive spillovers between co-workers, but only when workers’ pay is at least in part determined by the level of team output. In this case, the spillover effect is made up of a ‘production effect’, determined by the strength of the complementarities, and an ‘incentive effect’, determined by how responsive workers are to the pay-offs from their performance. Play-by-play data from major league baseball are used to test whether such spillovers exist between hitters over the course of a game. The results indicate that a player will perform better when the pay-off from his performance is high, which, in turn, will happen when his team-mates have performed well. Either the production effect or the incentive effect may dominate, depending on how strong the production complementarities are between two players. However, the spillover is very small and is more than offset by a direct negative spillover generated by team-mates changing the overall probability of team success. Consistent with theory, the payment of individual performance bonuses or of lower base salaries is found to weaken the responsiveness of players to the pay-offs from their performance.

Presenter:

Dr Kerry Papps joined the University of Bath in 2011 and became a senior lecturer in 2013. He undertook his undergraduate education in New Zealand and worked for the New Zealand Department of Labour before completing a PhD at Cornell University, where he held a Fulbright Scholarship. From 2007-2010 he was a research fellow at Nuffield College, Oxford and in 2011 was a visiting assistant professor at Cornell University. He has held short-term research posts at Motu Economics and Public Policy (New Zealand) and Imperial College London. Kerry is a research fellow of the IZA, Bonn and a fellow of the Higher Education Academy and he is an associate member of the Centre for the Analysis of Social Policy at Bath. He has been commissioned to provide research for the World Bank and the Low Pay Commission. He is Director of Studies for the MSc Economics programme.