

## **Economics Seminar, Indian Statistical Institute, New Delhi.**

**SPEAKER:** Shasikanta Nandeibam, University of Bath.

**TITLE:** **Menu Contracts in Teams.**

**TIME:** 3:30 AM - 01:00 PM

**DAY & DATE:** Tuesday, 5<sup>th</sup> August, 2014.

**PLACE:** Seminar Room 2

**Abstract:**

The existing literature on moral hazard in teams consider two types of team production technology: (i) deterministic technology; (ii) non-deterministic technology where the random factor is unobservable ex post and cannot be contracted upon. This models do not capture the kind of team production settings that we often observe where the random element can be observed ex post after the resolution of the uncertainty. In such situations it is natural to allow the team's sharing rule to also depend on the observed realisation of the random element. So we examine a moral hazard in team problem in which the share of each team member is a function of the observed realisations of both the final output and the random element. We provide a necessary and sufficient condition for implementing an outcome in Nash equilibrium. This characterization imposes restrictions on those deviations from the outcome that could have been caused unilaterally by each and every member of the team. We then use this characterization to derive a necessary and sufficient condition for implementing an efficient outcome in Nash equilibrium. We also demonstrate that this condition is not vacuous by considering some examples in which there are efficient outcomes that satisfy this condition. However, in the special case with quasi-linear utility functions, we show that efficient outcomes cannot be implemented. Finally, we also look at the case in which validity of the first-order approach is assumed. In this case we show that it is without loss of generality to consider only the class of sharing rules that are linear in the final output and efficient outcomes cannot be realized in Nash equilibrium.

**Key words:** team, outcome, sharing rule, implementation, efficient outcome.

**JEL Classification:** D82, D2, C72, J54.

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