

Assignments $\mathcal{N}^o$ 5 - PART I

released: 09.01.2013 **due:** 16.01.2013, 13:30h
 (solutions can be handed over at the beginning of the lecture)

Task 1: Model Interpretation

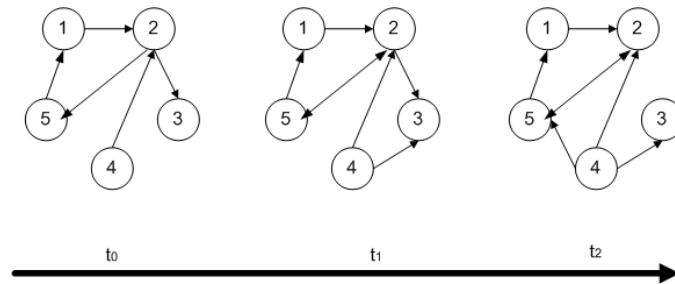
5 points

Assume we are involved in business consulting, investigating the evolution of hierarchy structure within an enterprise. Let some longitudinal network data indicate “who gives orders to whom” (year by year). Discuss the (un)suitability of the reciprocity and the 3-cycle effect in this setting!

Task 2: Parameter Estimation: MoM

5 points

A network is observed at 3 time points as shown below:



- Specify the vector of parameter θ when you model the network evolution according to outdegree, reciprocity and 3-cycle effects.
- Let us consider the MoM estimation:
 - Determine the statistics that are involved in the estimation process.
 - Set the moment condition(s).