

- 1. The above flow is for the Grumps estimator (green) and MLE (yellow); the share constraint estimator flow is the same as that for MLE, albeit that in the inner loop, no minimization takes place over the micro contribution. The cheap version of the Grumps estimator also follows the MLE path.
- 2. The main difference between Grumps and MLE is that MLE uses the optimization code found in the Optim package,

whereas Grumps uses a hacked version thereof that can be found in common/optim/pmlalgo.