**Matrix balancing**

Files go through the ME, CE, and Dual formulations for the matrix balancing problem **y=Ax** where **A** is a K by K matrix of the coefficients for each of the K columns. The coefficients for each column add up to 1 (i.e., a proper probability distribution).

**File 1:**

File: Matrix1.gms

Description

The gams file provides an 11 by 11 social accounting matrix (SAM) of the US. It compares the primal ME CE model with the concentrated (dual) CE model. It also provides the option of using uniform priors (equivalent to the primal) or use the provided priors.

Matrix for 1977 is used as priors for matrix for 1982 matrix.

Reference: Golan, Judge, Robinson, RESTAT 1994

**File 2:**

File: Matrix2.gms

Description

The gams file generates a 4 by 4 matrix and proceeds with the same methodology as the previous gams file.

**File 3:**

File: Matrix3.gms

Description

The file generates a 10 by 10 matrix and creates the 10 by 10 matrix of the coefficients. Noise is added to the data. Solves the Generalized ME (GME) and compares the mean squared errors for ME and GME. Investigate sensitivity for number of errors' supports.