Appendix C

Results for the simulated data sets generated

assuming dependence between y_1 and y_2

Table C-0

The parameters of the distributions of the z_i for each data set, and the representation of the ratios y_i in terms of those z_i, when y_3 and (y_1, y_2) are independent and cov(y_1,y_2) > 0

Table #	z_1	z_2	z_3	z_4	y_1	y_2	y_3
C-1	(2,3)	(5,7)	(26,17)	(16,22)	$z_2 z_4$	$z_3 z_4$	z_1
C-2	(5,7)	(2,10)	(50,2)	(100,1.1)	$z_2 z_4$	$z_3 z_4$	z_1
C-3	(2,6)	(5,2)	(2,1)	(4,6)	$z_2 z_3$	$z_2 z_4$	z_1
C-4	(2,3)	(26,17)	(100,1)	(50,2)	$z_1 z_3$	$z_1 z_4$	z_2

Table C-1.

1. y_1 and y_2 are the two most strongly correlated ratios (empirically).
2. The signs of the empirical correlations are preserved under the independent ratios model.
3. The signs of the empirical correlations are also preserved under all three dependent ratios models.
4. The Euclidean distances between the true (respectively, the empirical) correlations and the dependent ratios model are at least as small as the distance between the true (respectively, the empirical) correlations and the independent ratios model, for all three dependent ratios models considered.
5. The dependent ratios model with the true correlated pair gives a smaller Euclidean distance than the other two dependent ratios models.

Table C-2.

1. y_1 and y_2 are the two most strongly correlated ratios (empirically).
2. The signs of the empirical correlations are preserved under the independent ratios model.
3. The signs of the empirical correlations are also preserved under all three dependent ratios models.
4. The Euclidean distances between the empirical correlations and the dependent ratios model are at least as small as the distance between the empirical correlations and the independent ratios model, for all three dependent ratios models considered.
5. The dependent ratios model with the true correlated pair gives a smaller Euclidean distance than the other two dependent ratios models for empirical only.

Table C-3.

1. y_1 and y_2 are the two most strongly correlated ratios (empirically).
2. The signs of the true correlations are preserved under the independent ratios model.
3. The signs of the true correlations are also preserved under all three dependent ratios models except the model where y_1 and y_2 are assumed to be correlated. While the signs of the empirical correlations are preserved only under the model where y_1 and y_2 are assumed to be correlated.
4. The Euclidean distances between the empirical correlations and the dependent ratios model are at least as small as the distance between the empirical correlations and the independent ratios model, for all three dependent ratios models considered.
5. The dependent ratios model with the true correlated pair gives a smaller Euclidean distance than the other two dependent ratios models for empirical only.

Table C-4.

1. y_1 and y_2 are the two most strongly correlated ratios (empirically).
2. The signs of both the true and the empirical correlations are not preserved under the independent ratios model.
3. The signs of the empirical correlations are preserved only under the model where y_1 and y_2 are assumed to be correlated.
4. The Euclidean distances between the empirical correlations and the dependent ratios model are at least as small as the distance between the empirical correlations and the independent ratios model, for all three dependent ratios models considered.
5. The dependent ratios model with the true correlated pair gives a smaller Euclidean distance than the other two dependent ratios models for empirical only.