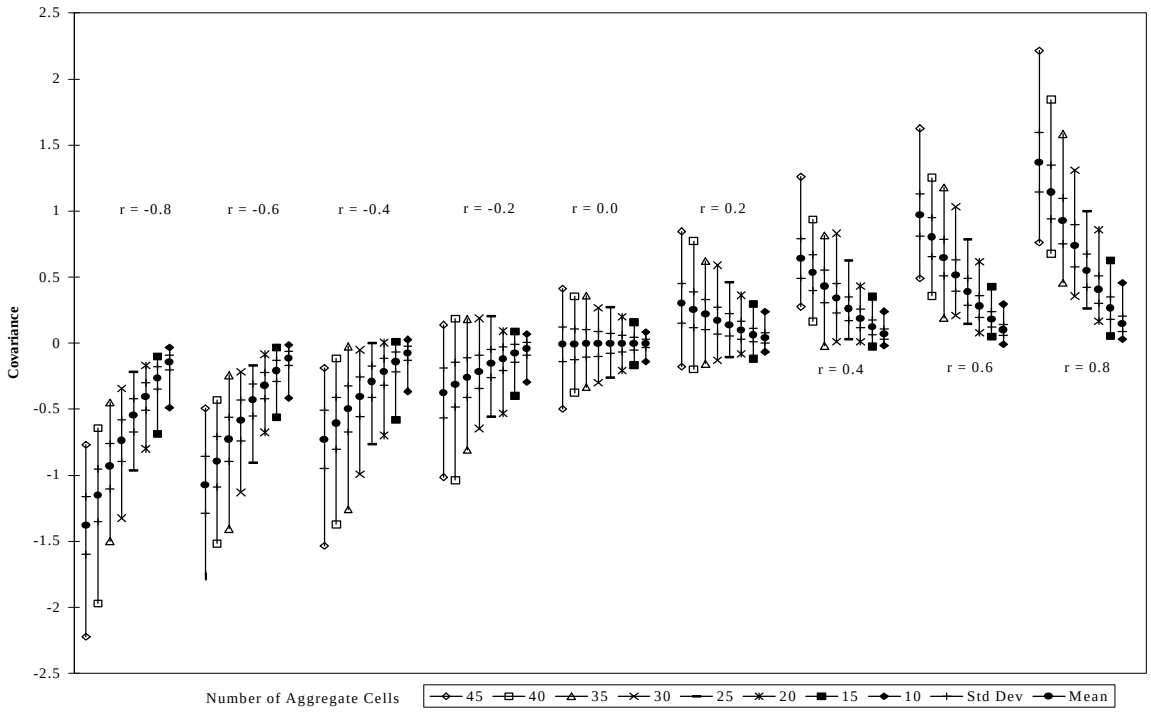
5.10. Figures for Chapter 5

a)



b)

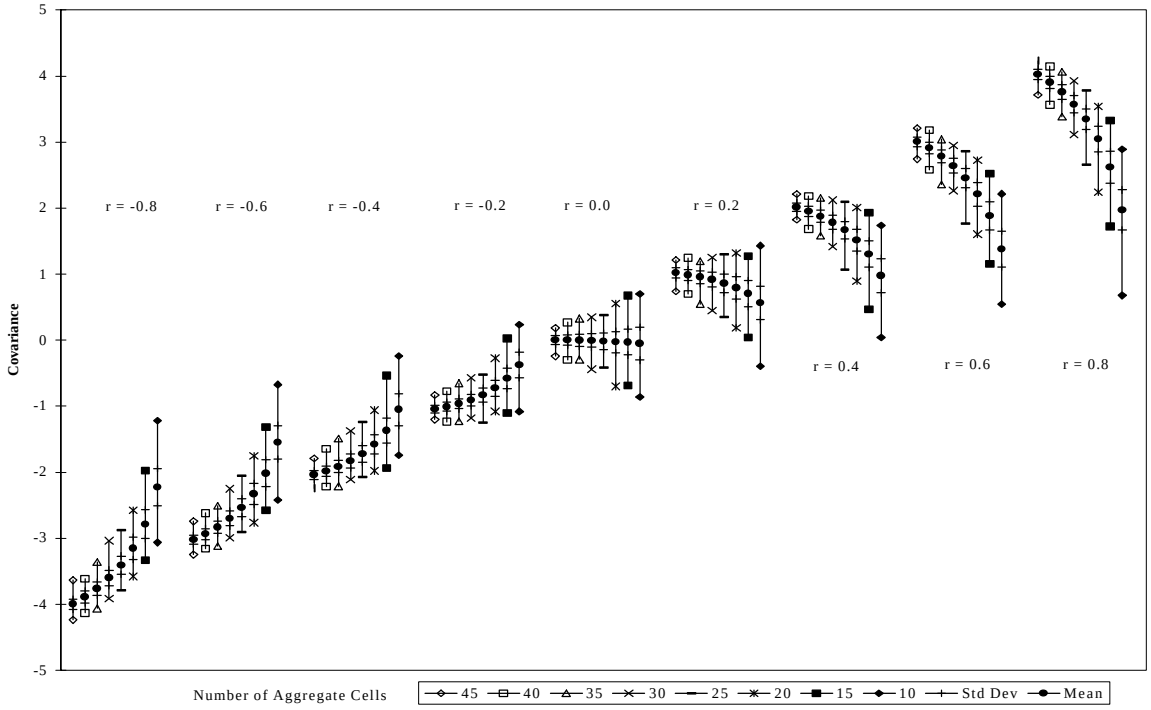
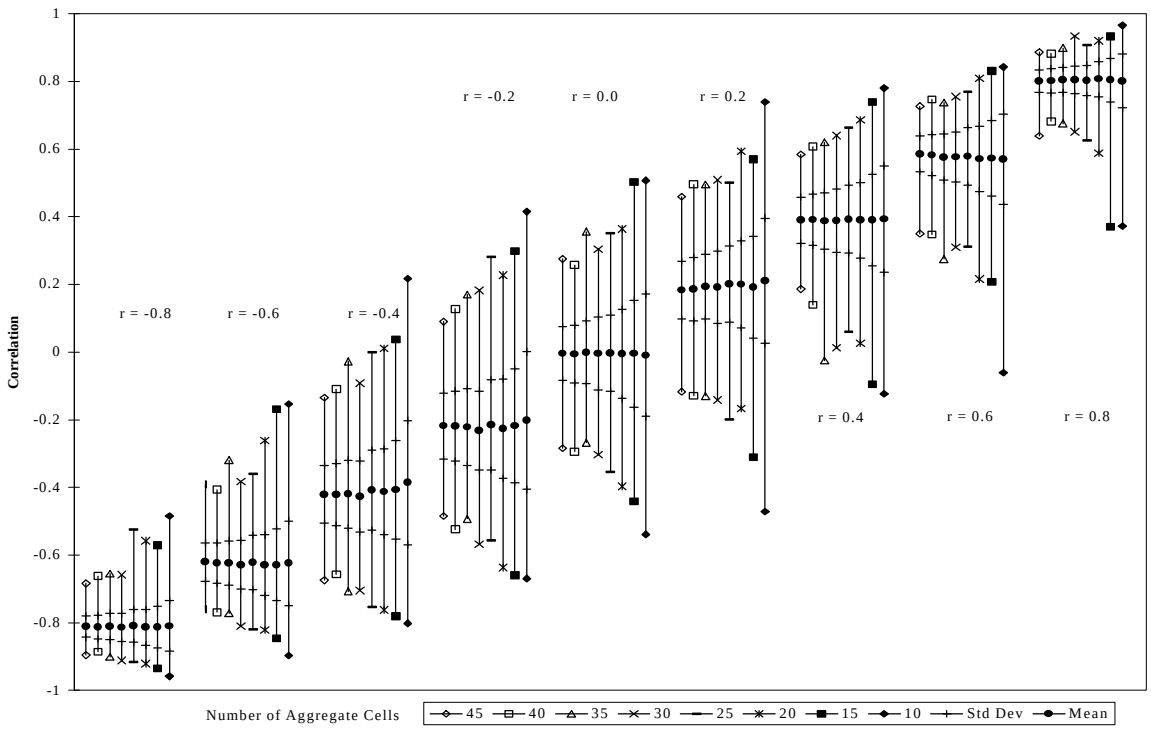


Figure 5.1: Variation of aggregated covariance with initial correlation where dependent and independent variables have MCs of (a) -0.4 and (b) 0.8. Note how the concavity of the line joining the heavy dots changes between the diagrams.

a)



b)

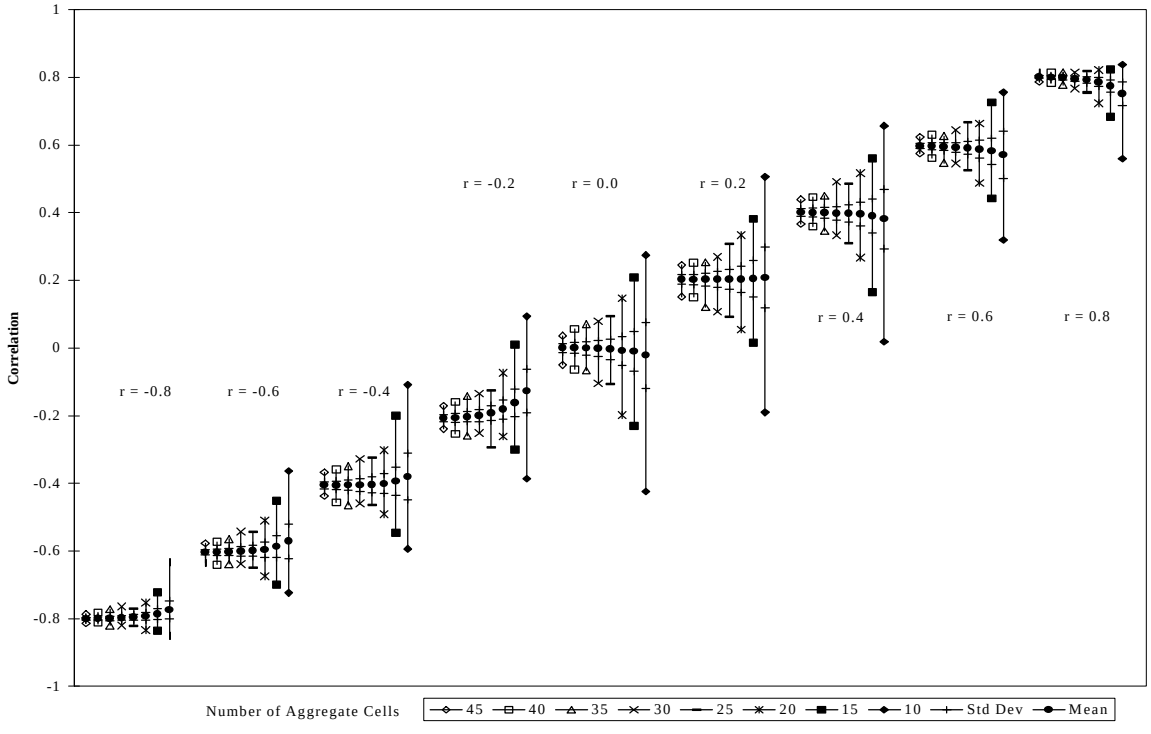
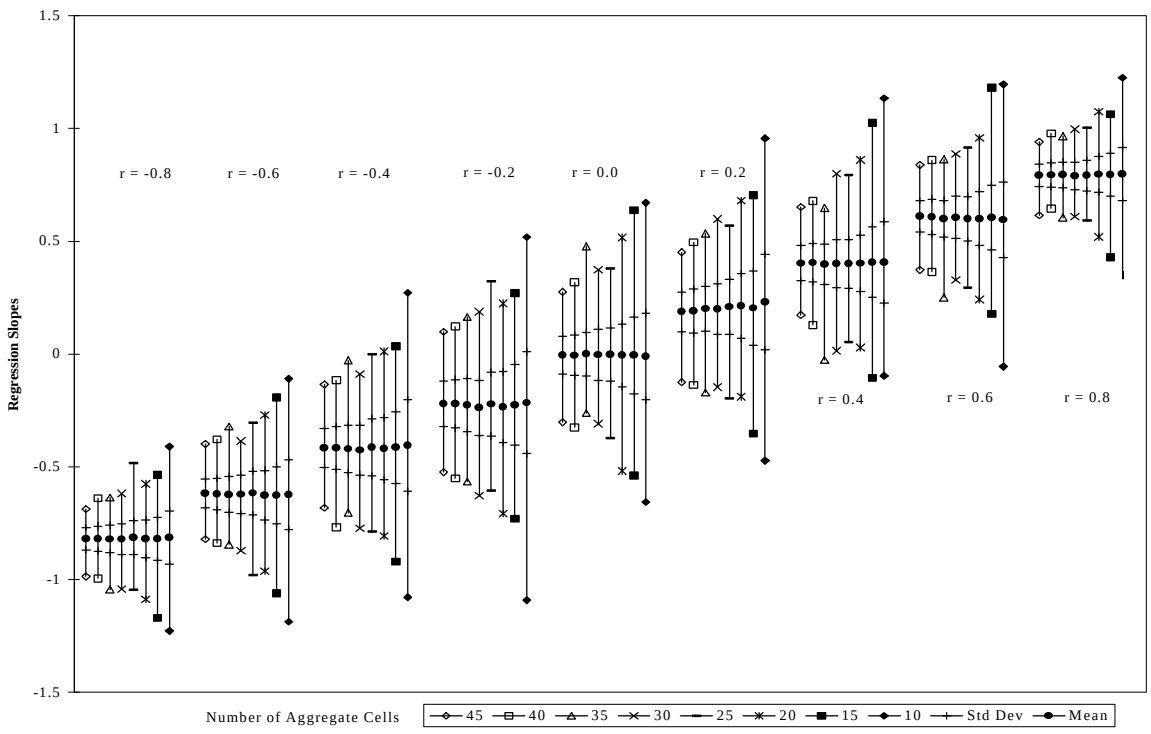


Figure 5.2: Variation of aggregated correlation with initial correlation where dependent and independent variables have MCs of (a) -0.4 and (b) 0.8. Note the symmetry of the ranges, and how the ranges decrease with increasing MC of the variables.

a)



b)

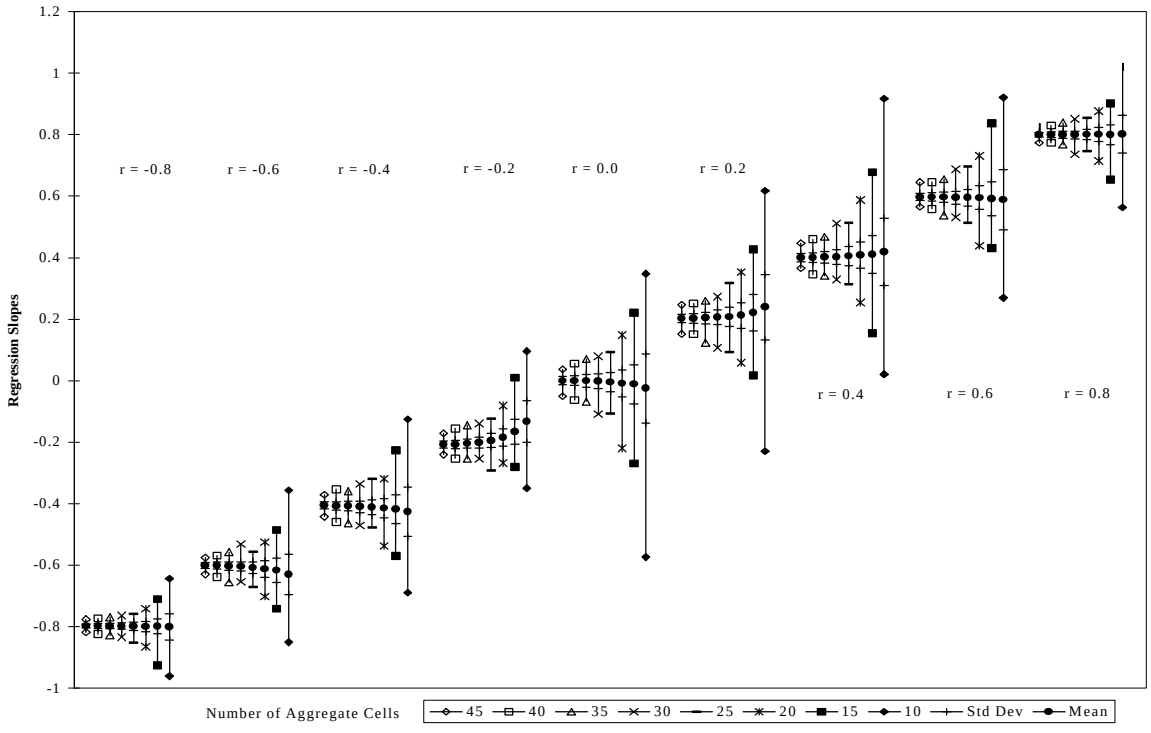
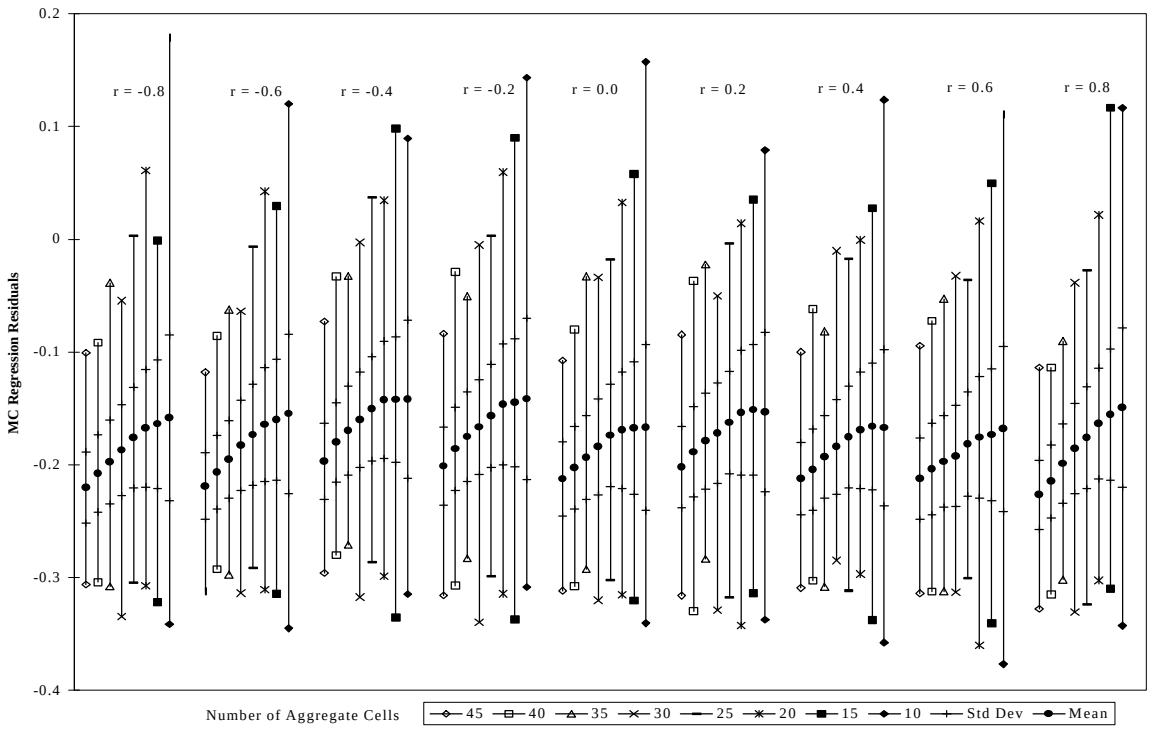


Figure 5.3: Variation of aggregated upper triangle (row is independent, column dependent) of the matrix of regression slope parameters with initial correlation, where dependent and independent variables have MCs of (a) -0.4 and (b) 0.8. Note the general lack of dependence on initial correlation. The lower triangle behaves similarly.

a)



b)

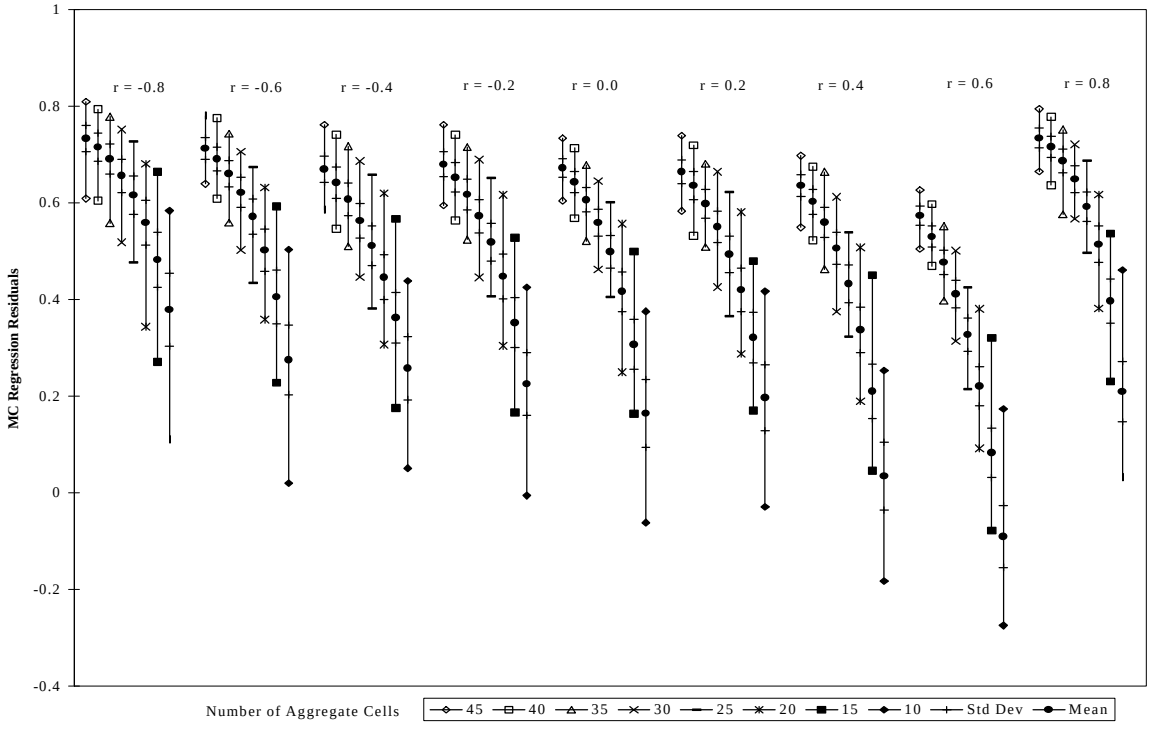
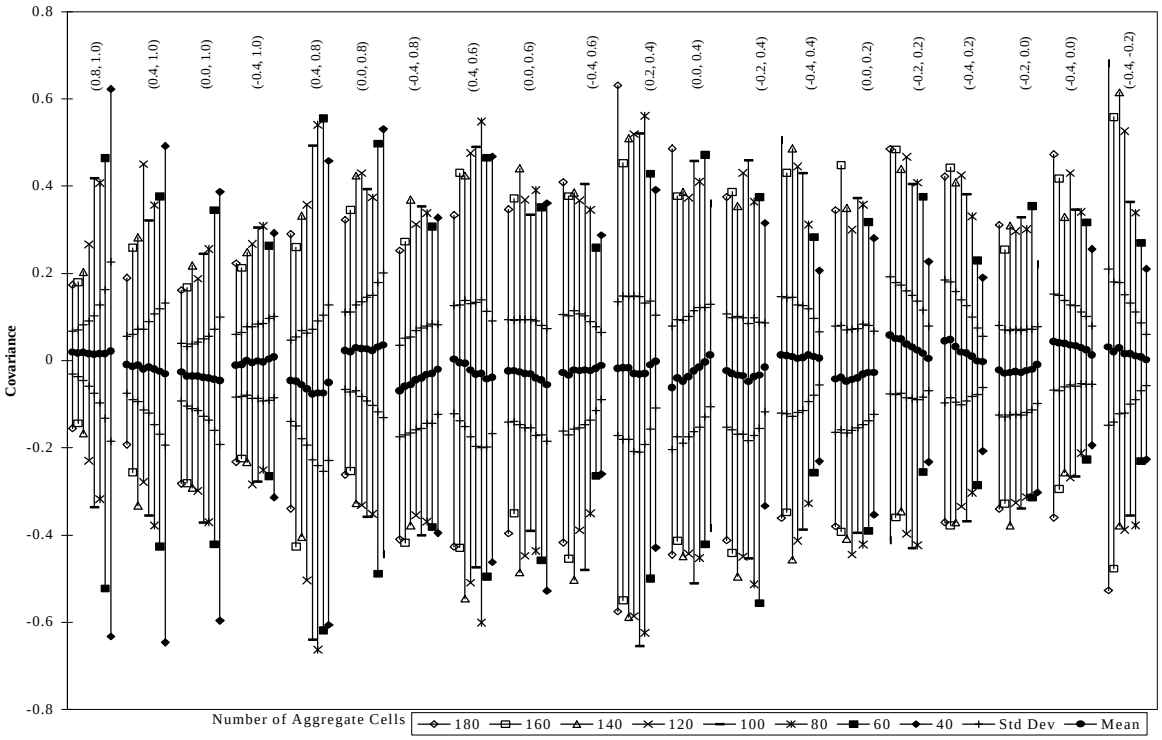


Figure 5.4: Variation of the MC of regression residuals with the original correlation, where dependent and independent variables have the original MC of a) -0.4 and b) 0.8. Note the general lack of dependence on correlation.

a)



b)

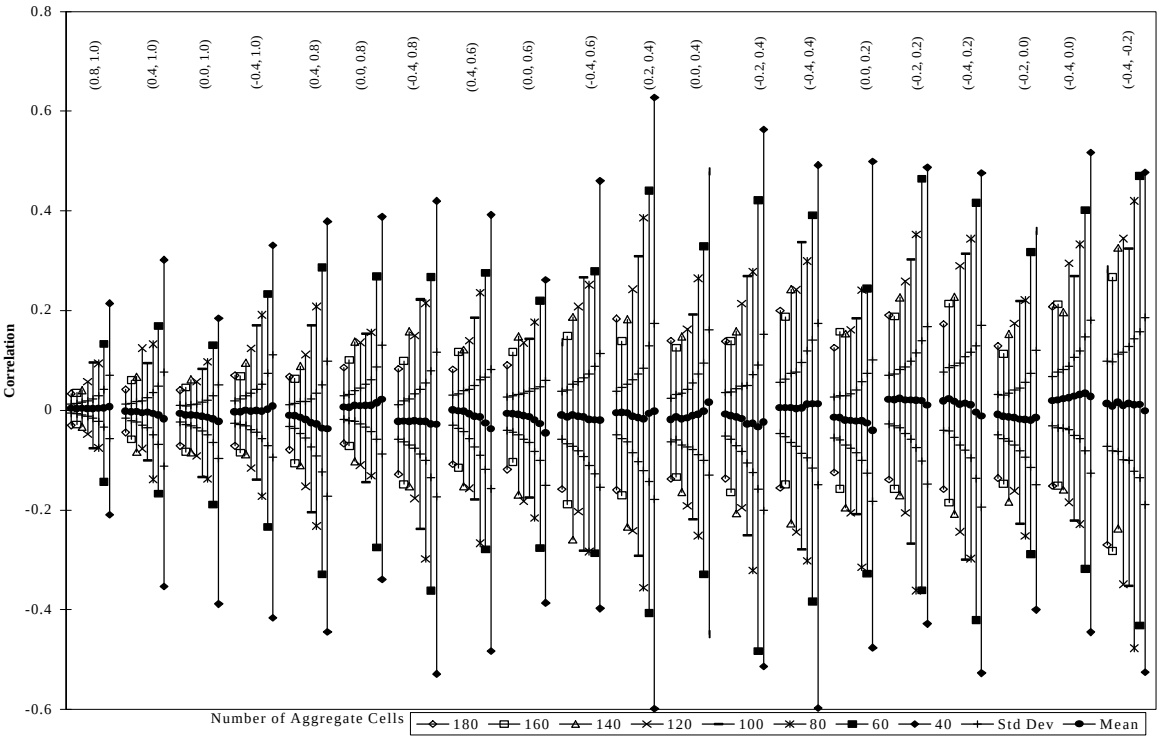
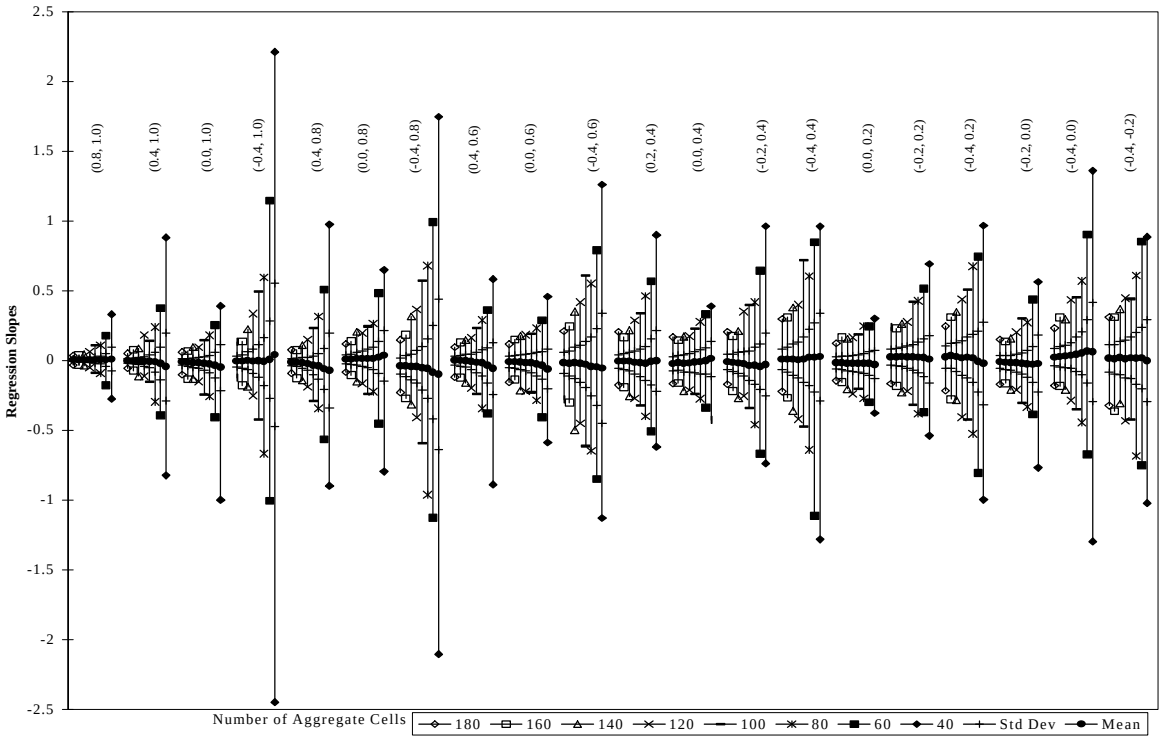


Figure 5.5: Variation of covariances (top) and correlations with the (MC independent, MC dependent) variables for an initial correlation of 0.0. Note how the pattern of change in a) is similar to that between Figures 5.1a and 5.1b.

c)



d)

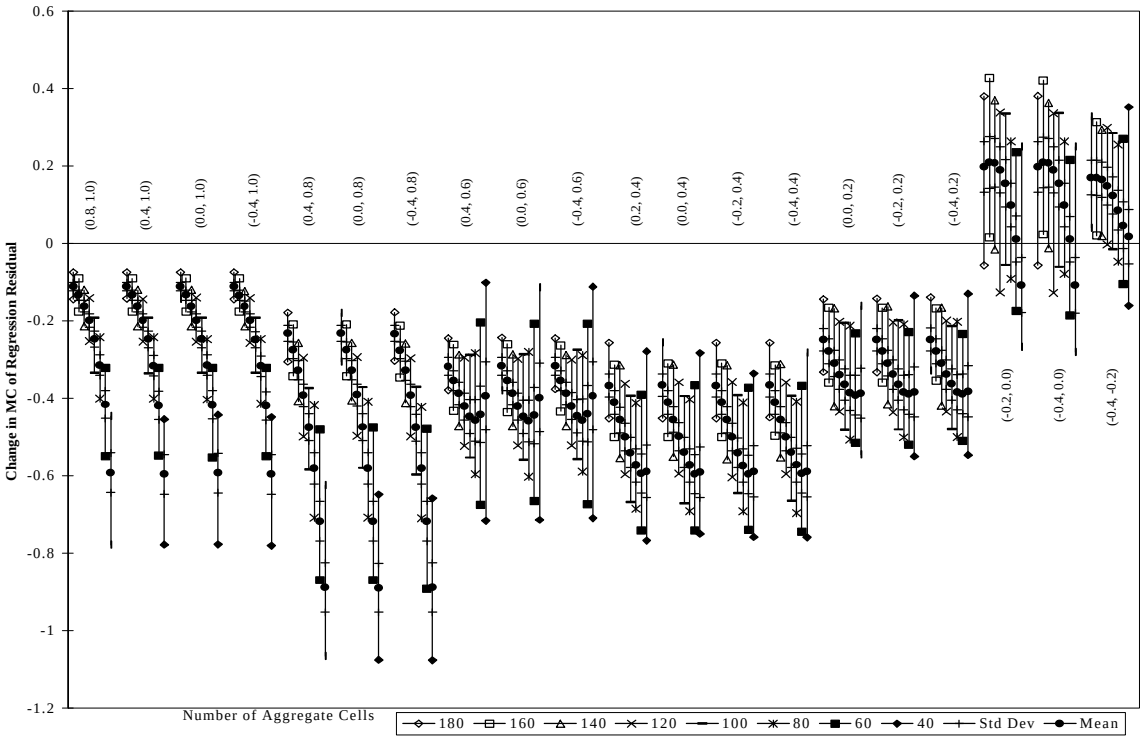


Figure 5.5, con't: Variation of upper triangle of regression slope parameters (top) and change in MC_{RR} with the (MC independent, MC dependent) variables for an initial correlation of 0.0. Note the lack of dependence of MC_{RR} on the MC of the independent variable.

a)

b)

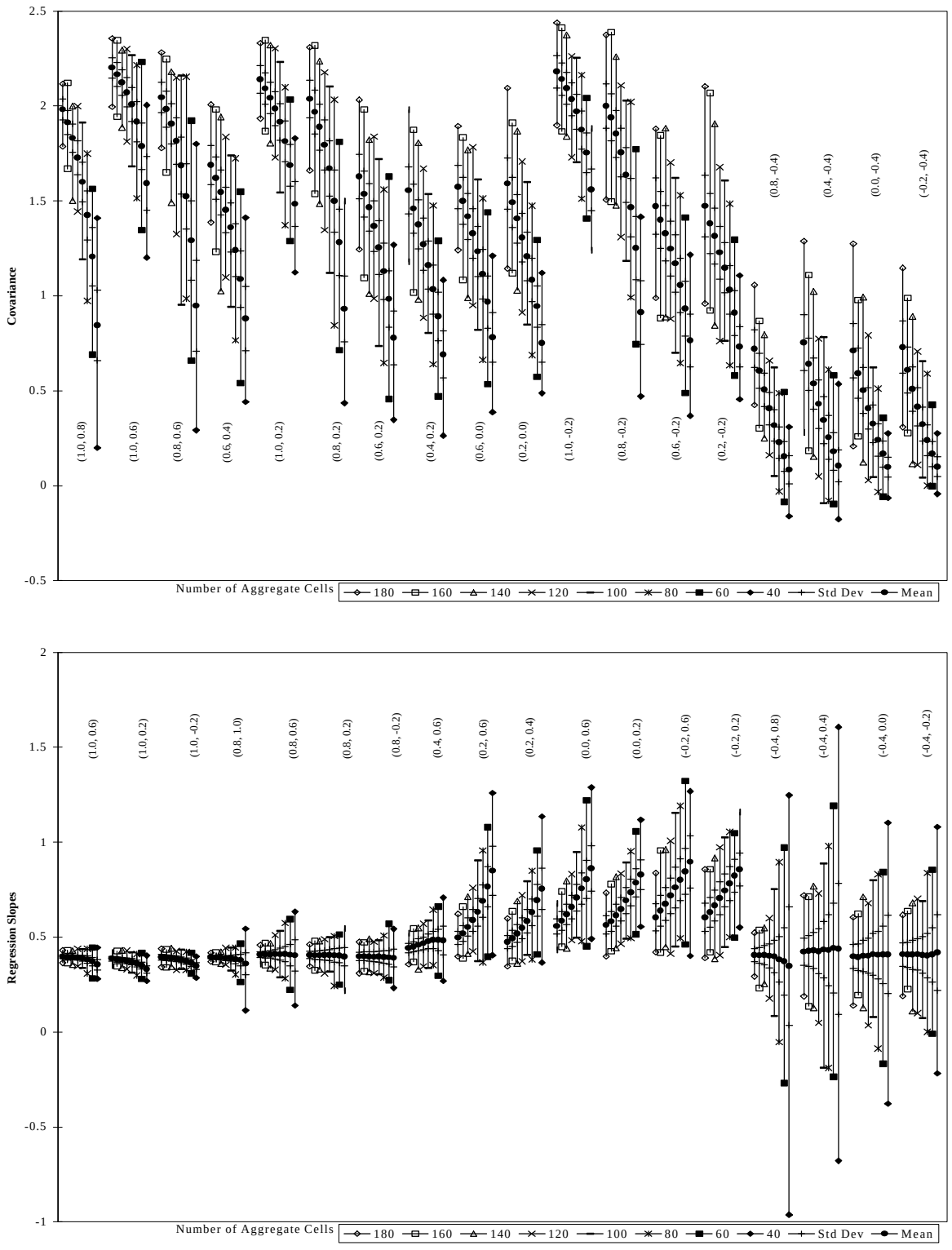


Figure 5.6: Variation of covariance (top) and upper triangle of the matrix of regression slope coefficients with the (MC independent, MC dependent) variables for an initial correlation of 0.4.

c)

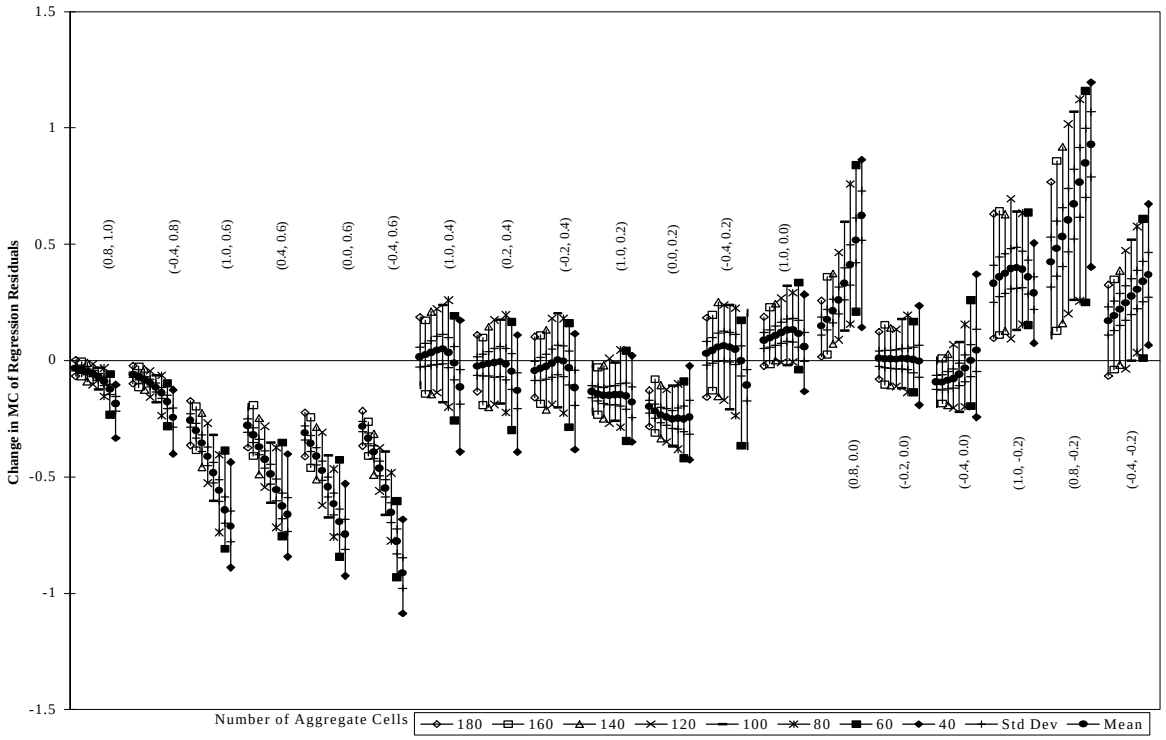


Figure 5.6 (con't): The change in the MC_{RR} with the (MC independent, MC dependent) variables for an initial correlation of 0.4. Again note the general lack of dependence on the independent variable, and how it tends to decrease for the high MCs and increase for the low MCs, indicating a general trend towards random autocorrelations.

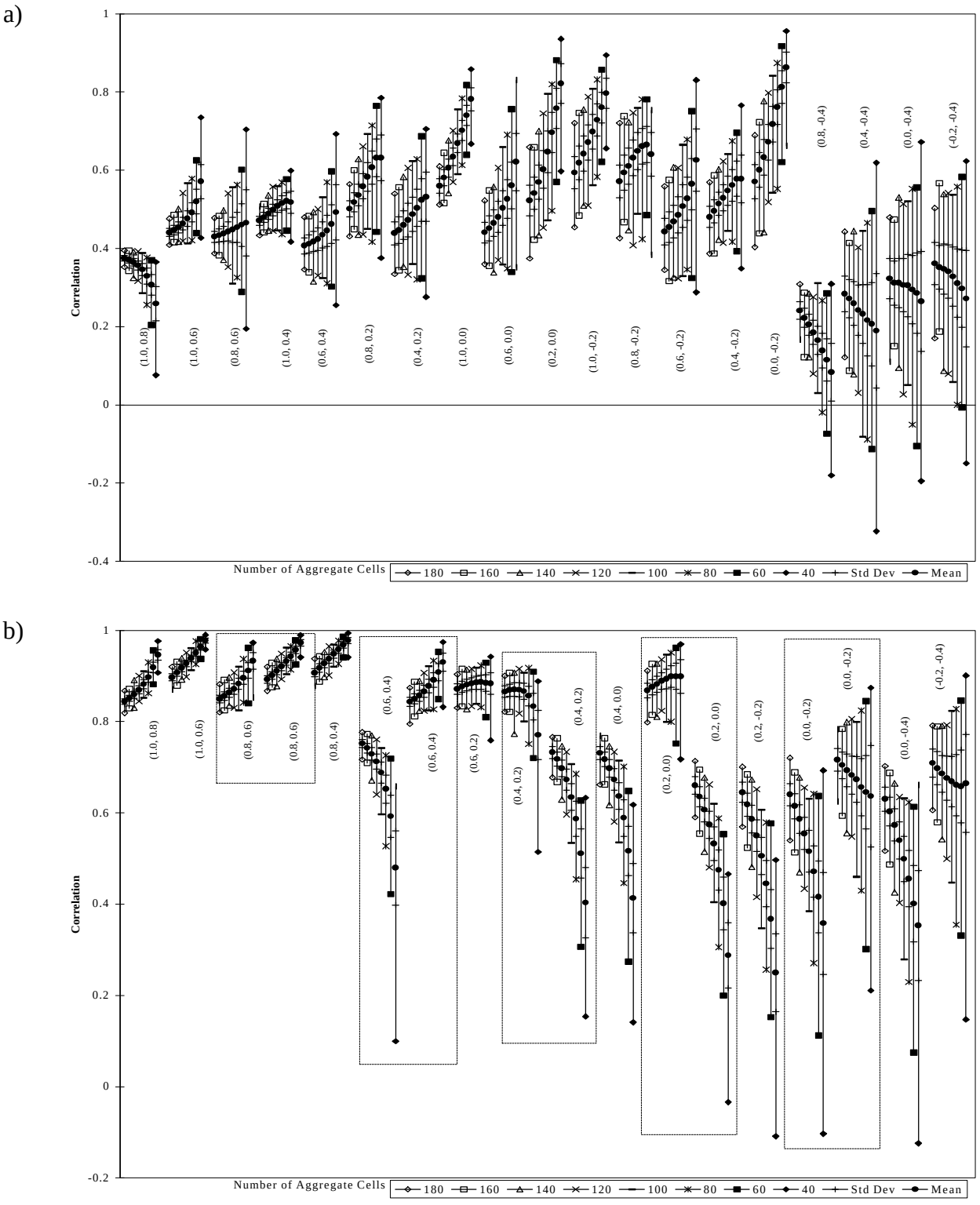


Figure 5.7: Variation of correlation with the (MC independent, MC dependent) variables for initial correlations of 0.4 (top) and 0.8. Note the often wide variation in behaviour of correlations in the dashed boxes where the dependent and independent variables have the same MCs, likely caused by differences in spatial arrangements of the variables.

a)

b)

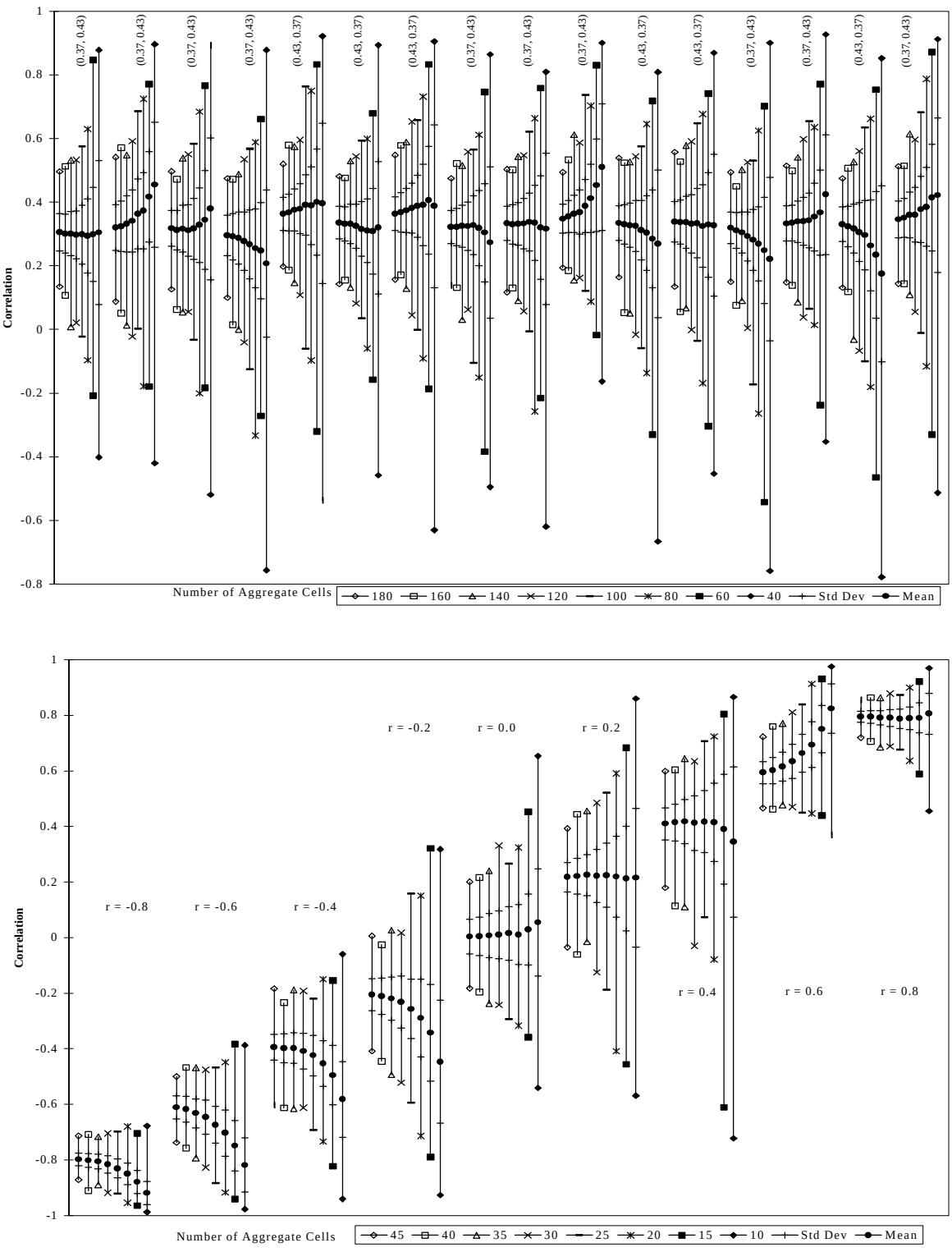


Figure 5.8: Variation of correlation for several combinations of variables whose MCs and correlations mimic those used in Openshaw and Taylor (1979) (top), and for a set of variables with MCs of 0.4 and different correlations (bottom). These results generally agree with those of Openshaw and Taylor.