

In this Supplementary Material, we provide a set of diagnostic results of the Bayesian estimation models. First, consider the Gelman-Rubin statistic for convergence in the Florida employment and fatality rate models. As shown in Table S1, the convergence diagnostics for all model parameters are less than 1.1, which suggest that all parameters under both MCMC chains have converged. Next, consider the traces plots and histograms of the parameters for both models under the two MCMC chains (in red and blue) which were used in the final analysis. A trace plot is a line that connects consecutive values of the simulated parameters against the iteration number. Thus, a parameter with convergence problems would have a trace plot with sparseness and trends. There are no such patterns in the trace plots. The subsequent histograms of the posterior distributions of the parameters show that the samples from the two chains are generally indistinguishable.

Table S1. Gelman–Rubin statistics for the Florida employment and fatality rate model parameters.

Employment Equation		Fatality Rate Equation	
α_0	1.0016	β_0	1.0007
α_1	1.0053	β_1	1.0009
α_2	1.0029	β_2	1.0009
β_3	1.0049	β_3	1.0015
β_4	1.0542	σ^2	1.0000
β_5	1.0040		
β_6	1.0013		
σ^2	1.0002		

Note. Converged if the Gelman–Rubin statistic < 1.1 .

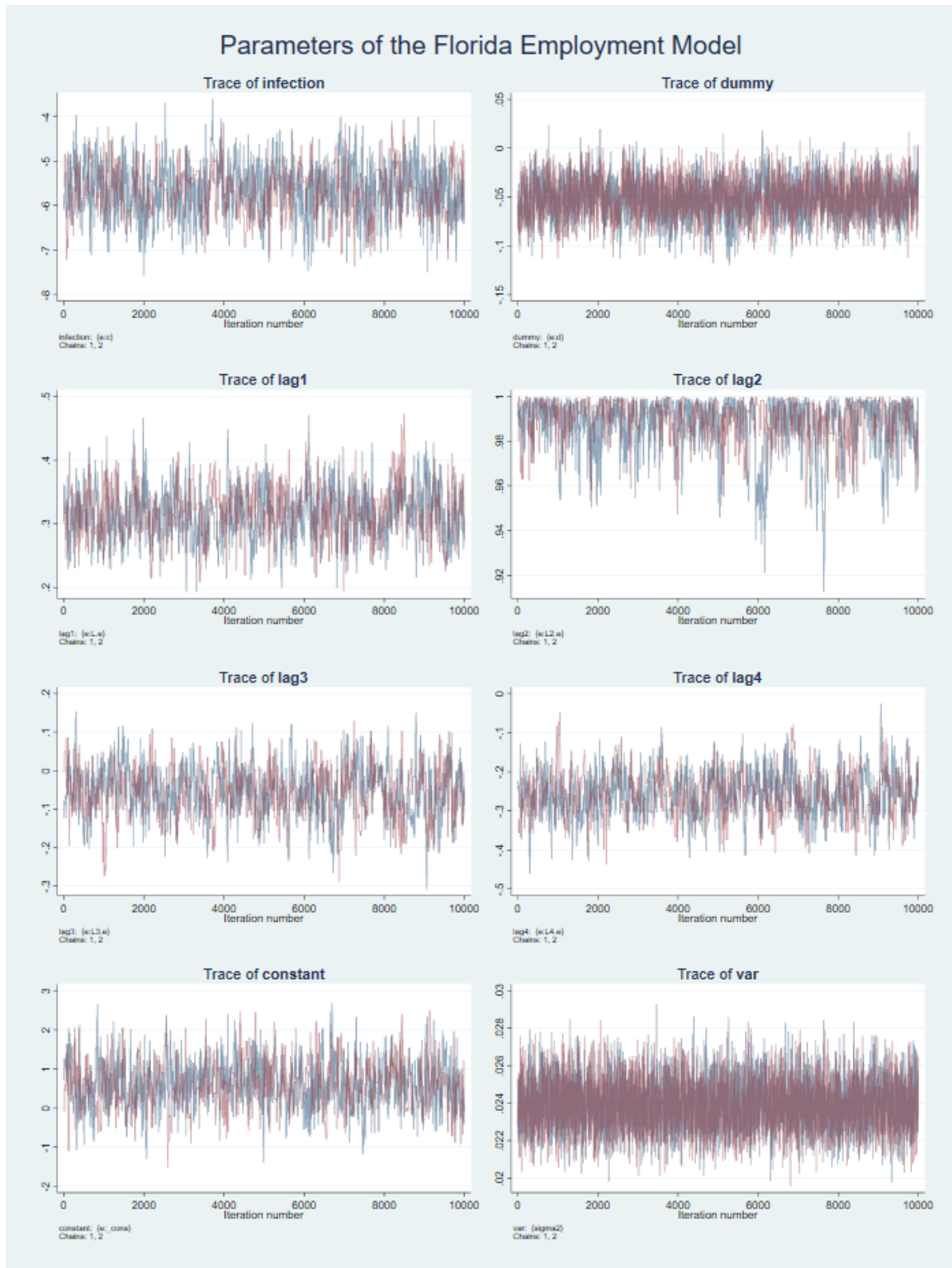


Figure S1. Trace plots of parameters of the Florida employment model

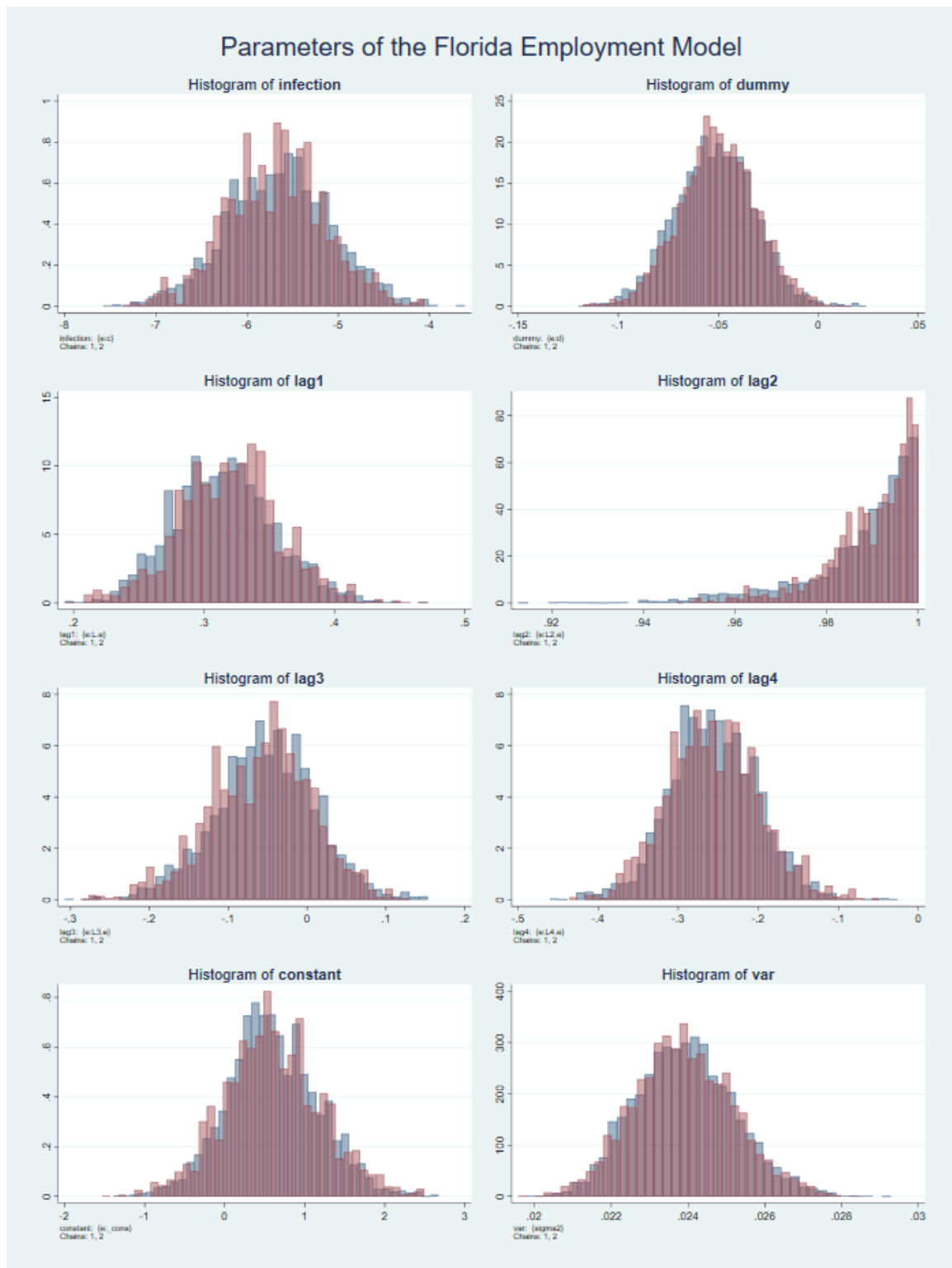


Figure S2. Histograms of parameters of the Florida employment model

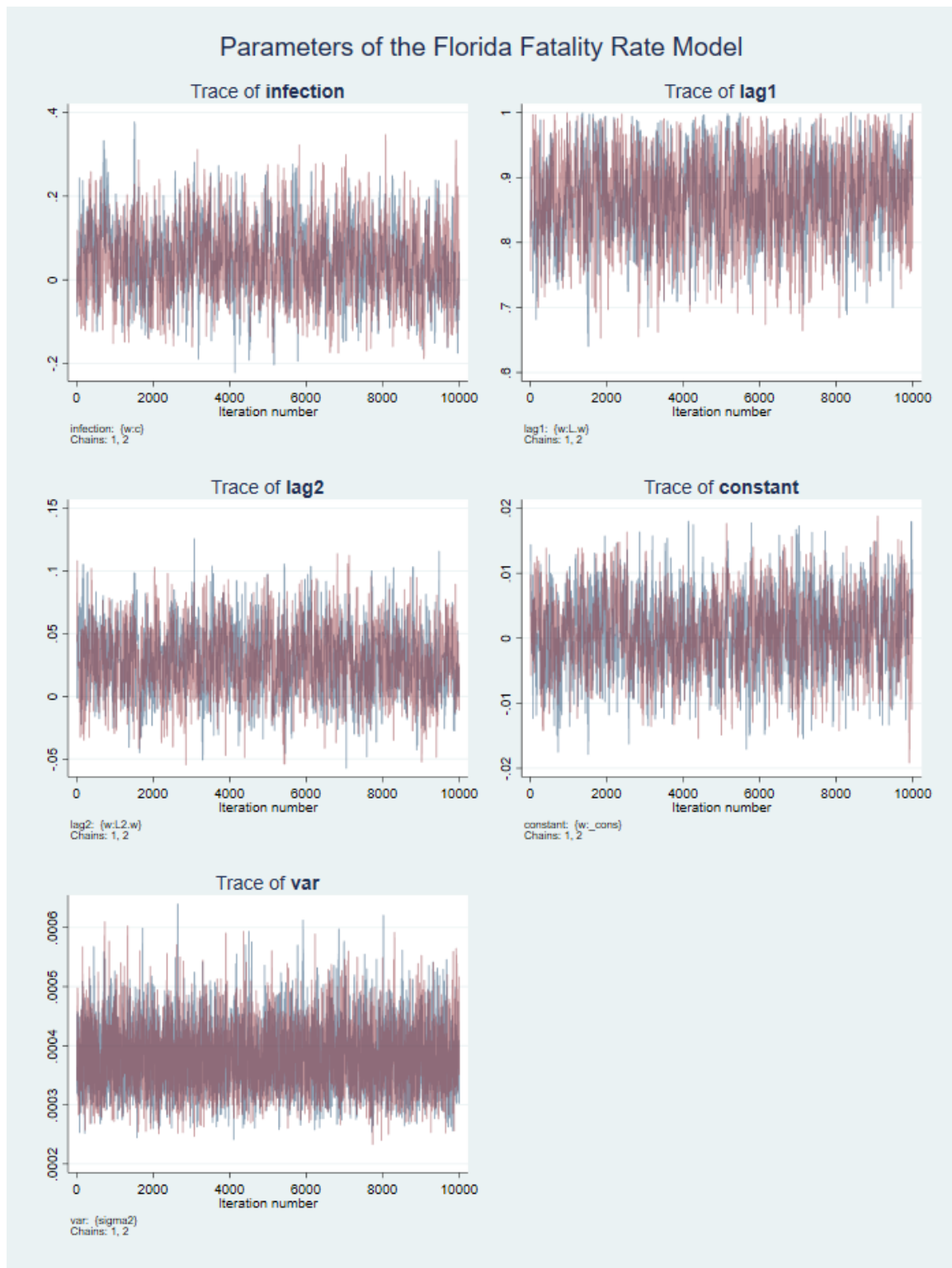


Figure S3. Trace plots of parameters in the Florida fatality rate model

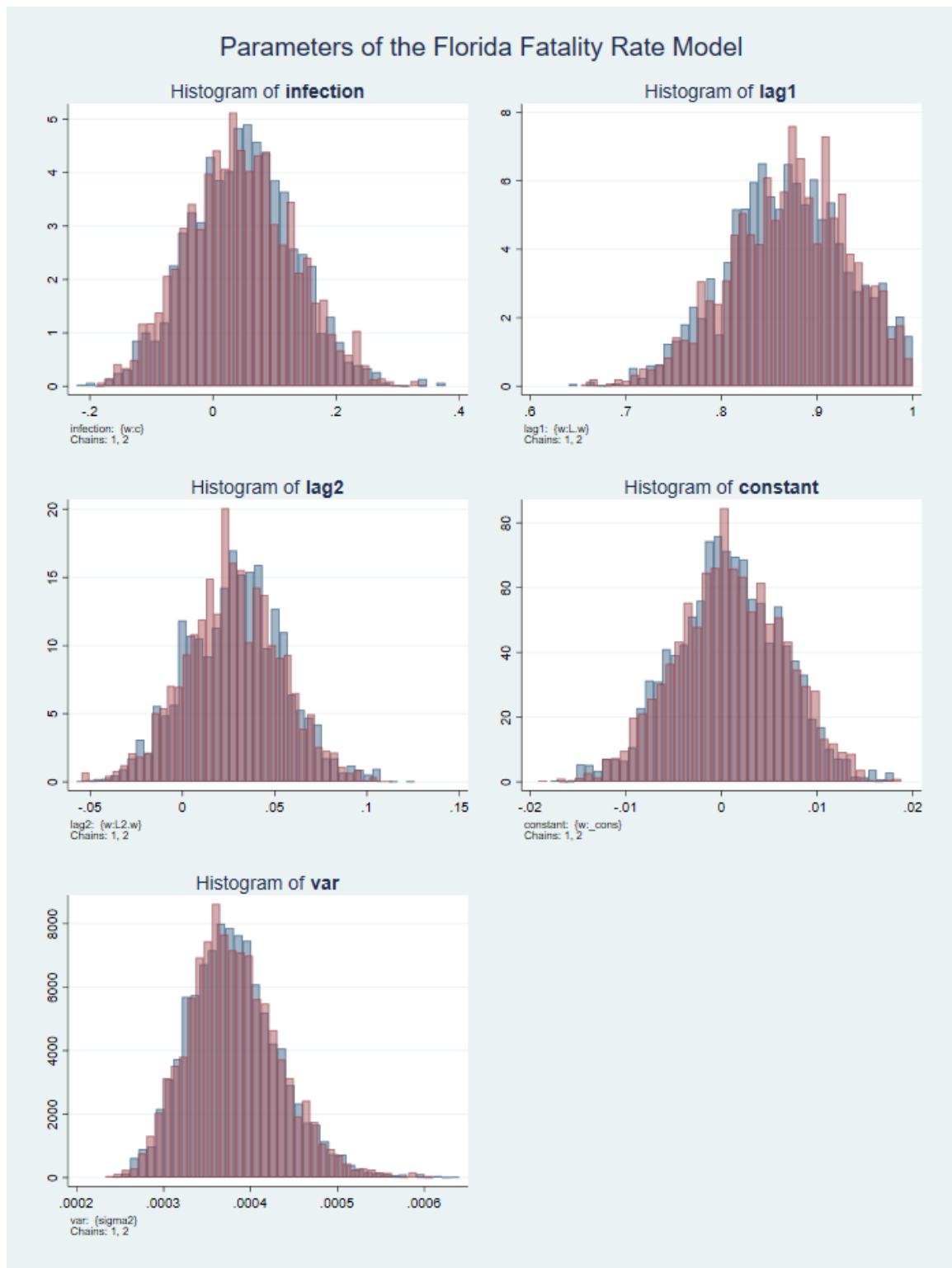


Figure S4. Histograms of parameters of the Florida fatality rate model