

## S1 Appendix

		WAIC
Model 0	$\log(\mu_{i,t}) = \log(e_i) + \beta_0 + \phi_i$	34114.6
Model 1	$\log(\mu_{i,t}) = \log(e_i) + \beta_0 + X'_i \beta_{k,t}$	26418.3
Model 2	$\log(\mu_{i,t}) = \log(e_i) + \beta_0 + X'_i \beta_{k,t} + \phi_i$	19656.6
Model 3	$\log(\mu_{i,t}) = \log(e_i) + \beta_0 + U_{i,t} + \phi_i$ $U_{i,t} = \rho_i U_{i,t-1} + \zeta_i \text{Temperature}_{i,t}$	*
Model 4	$\log(\mu_{i,t}) = \log(e_i) + \beta_0 + X'_i \beta_{k,t} + U_{i,t} + \phi_i$ $U_{i,t} = \rho_i U_{i,t-1} + \zeta_i \text{Temperature}_{i,t}$	17934.8

\* Model 3 showed lack of convergence.