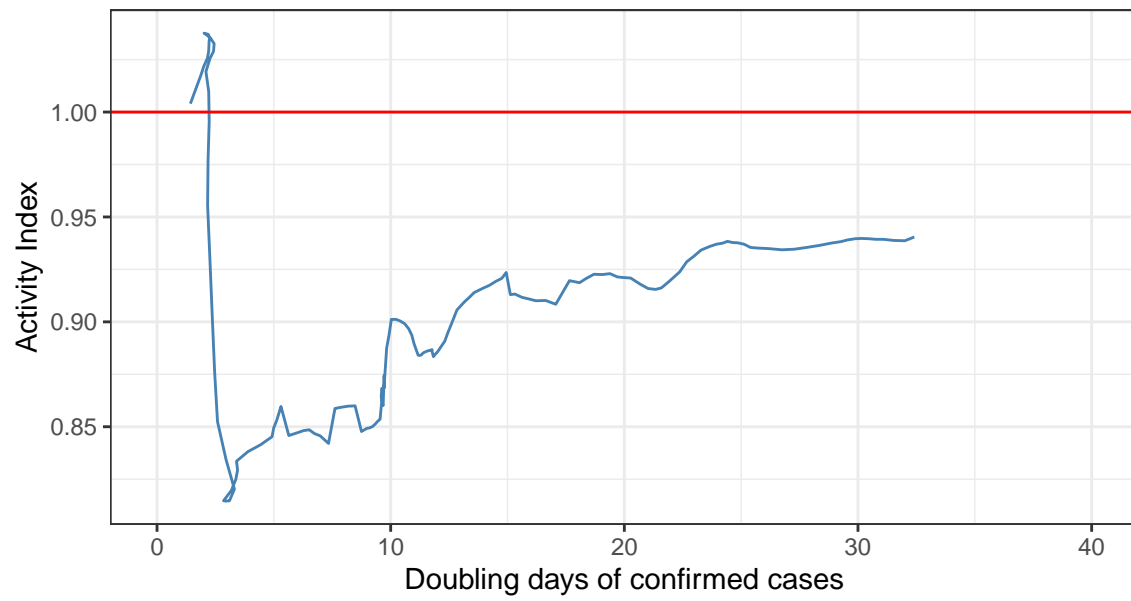


Atividade x COVID

Brasil



Usando dados de mobilidade e energia

Utilizamos os dados de mobilidade do Google para montar o índice de atividade, de forma que:

$$\text{Atividade} = 0.3886 \cdot \text{Mobilidade} + 0.61$$

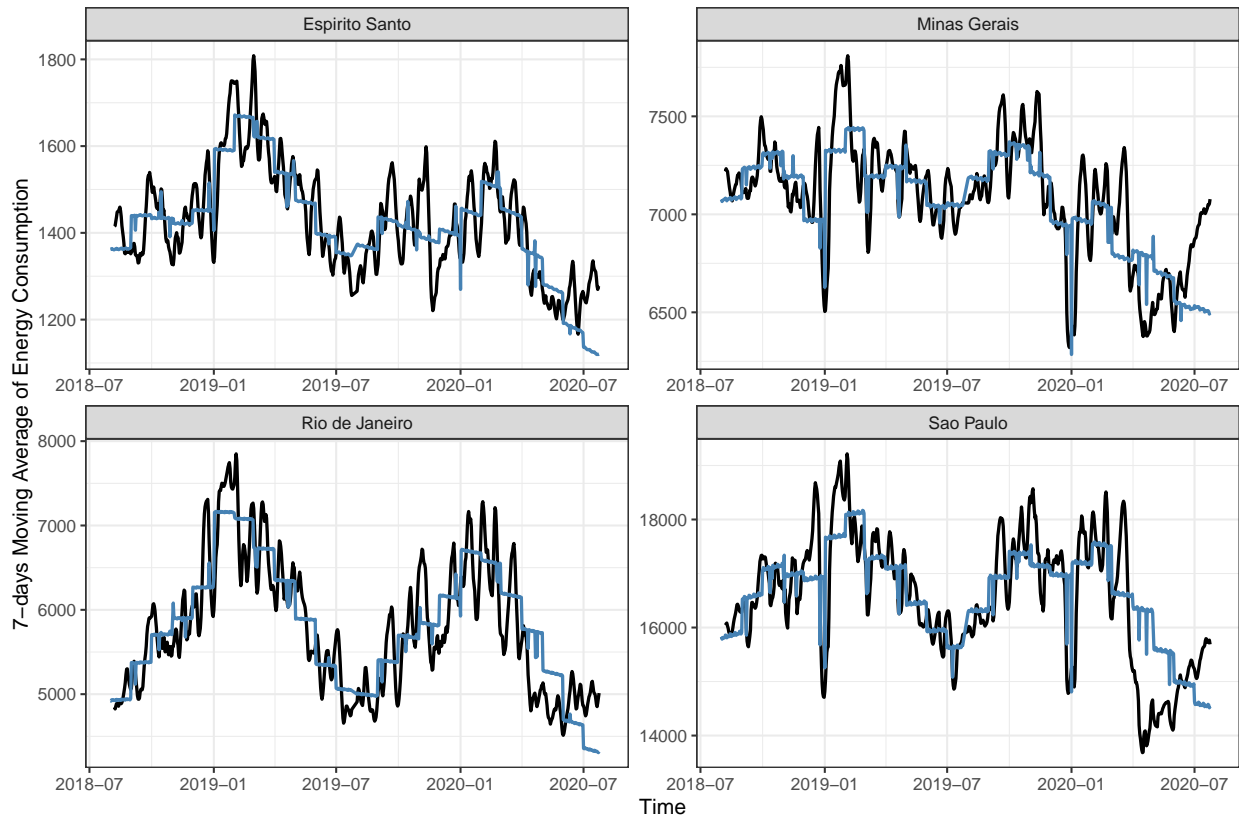
Para definir o contrafactual nos dados de energia, fazemos uma regressão para cada estado, com os dados de 08/2018 até 02/2020, da seguinte forma:

$$\begin{aligned} \text{Média Móvel de 7 dias do Consumo Diário}_t = & \beta_0 + \sum_{i=2}^3 \psi_i D_{\text{ano}_{it}} + \sum_{i=2}^{12} \delta_i D_{\text{mês}_{it}} + \sum_{i=2}^7 \lambda_i D_{\text{dia da semana}_{it}} + \\ & + \sum_{i=2}^k \theta_i D_{\text{feriado}_{it}} + \phi_1 t + \phi_2 t^2 + \epsilon_t \end{aligned} \quad (1)$$

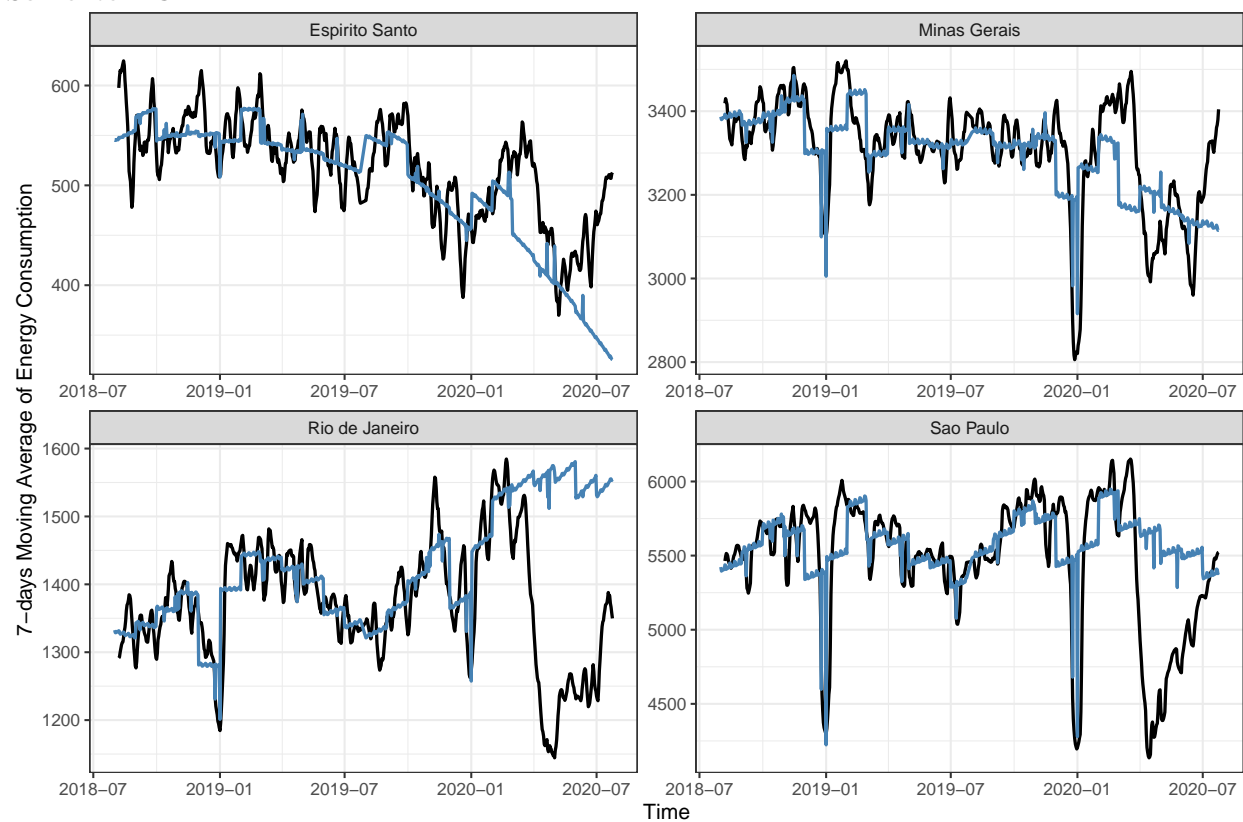
A partir de 1, usamos os valores preditos para os dados a partir de Março de 2020 como o esperado para o consumo de energia. A diferença percentual mostrada nos gráficos abaixo se baseia nesses valores.

Testando o fit nos dados de energia

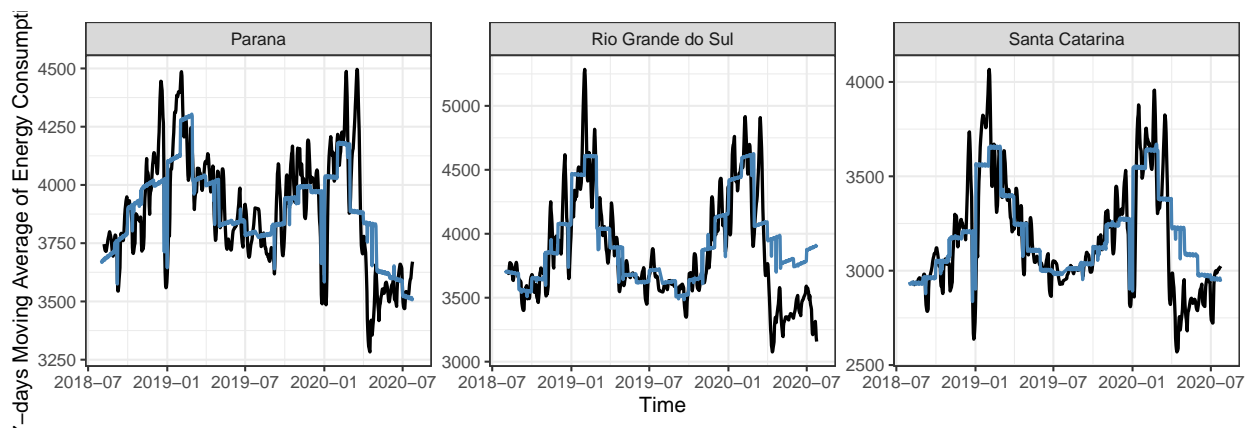
Região Sudeste



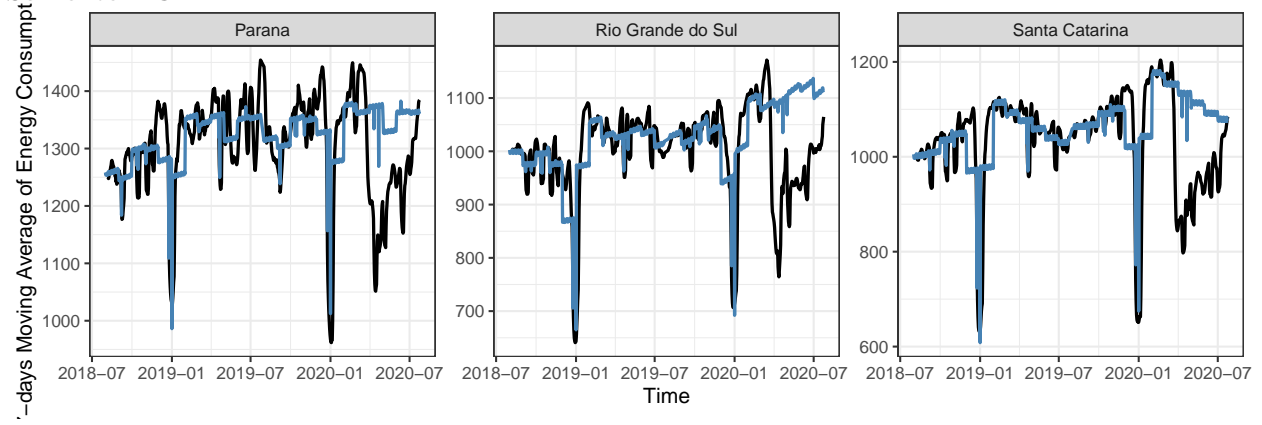
Somente ACL



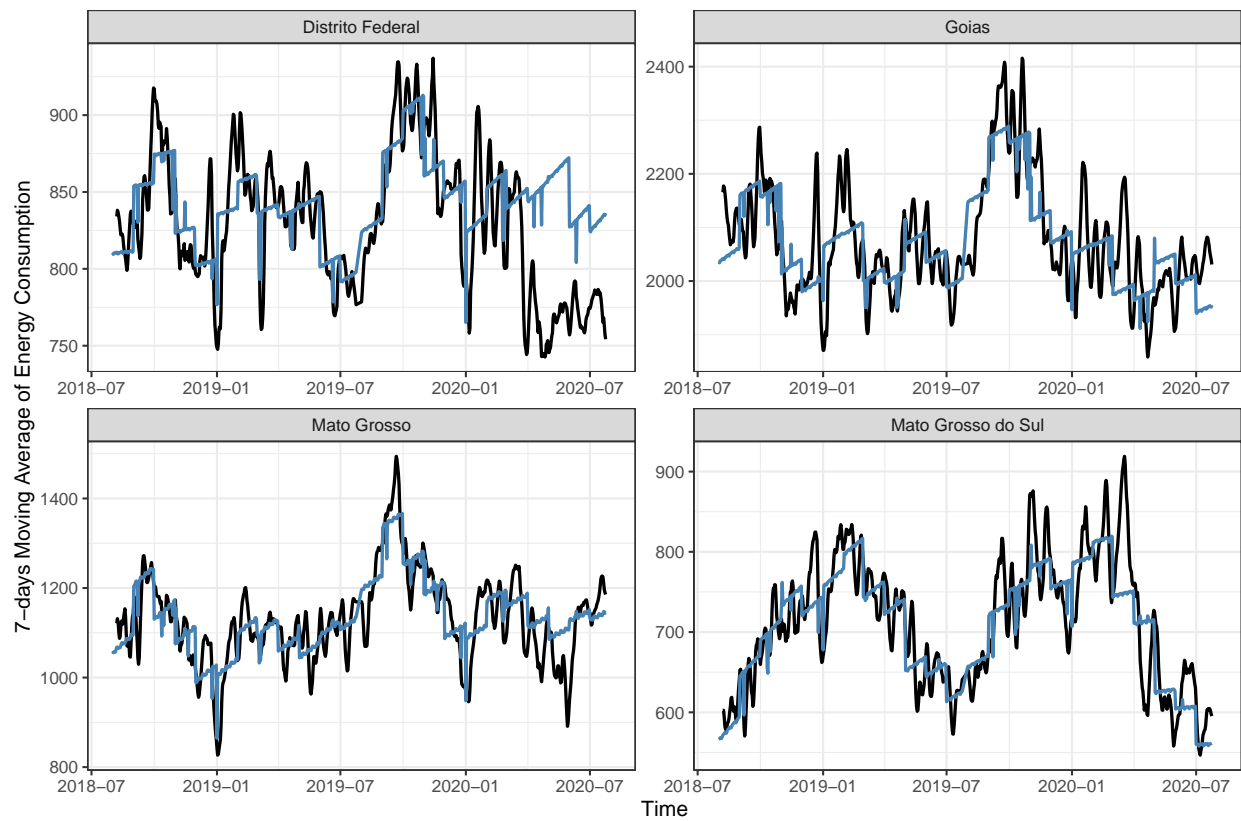
Região Sul



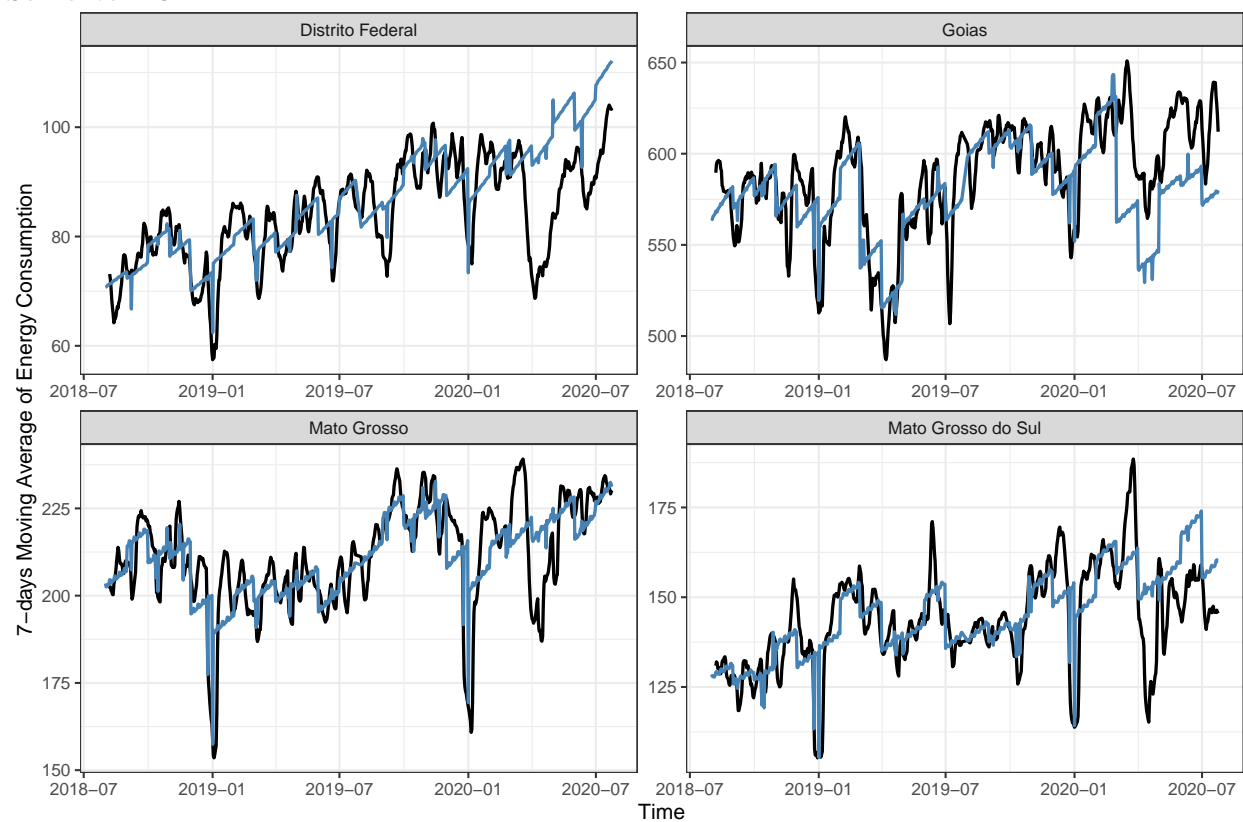
Somente ACL



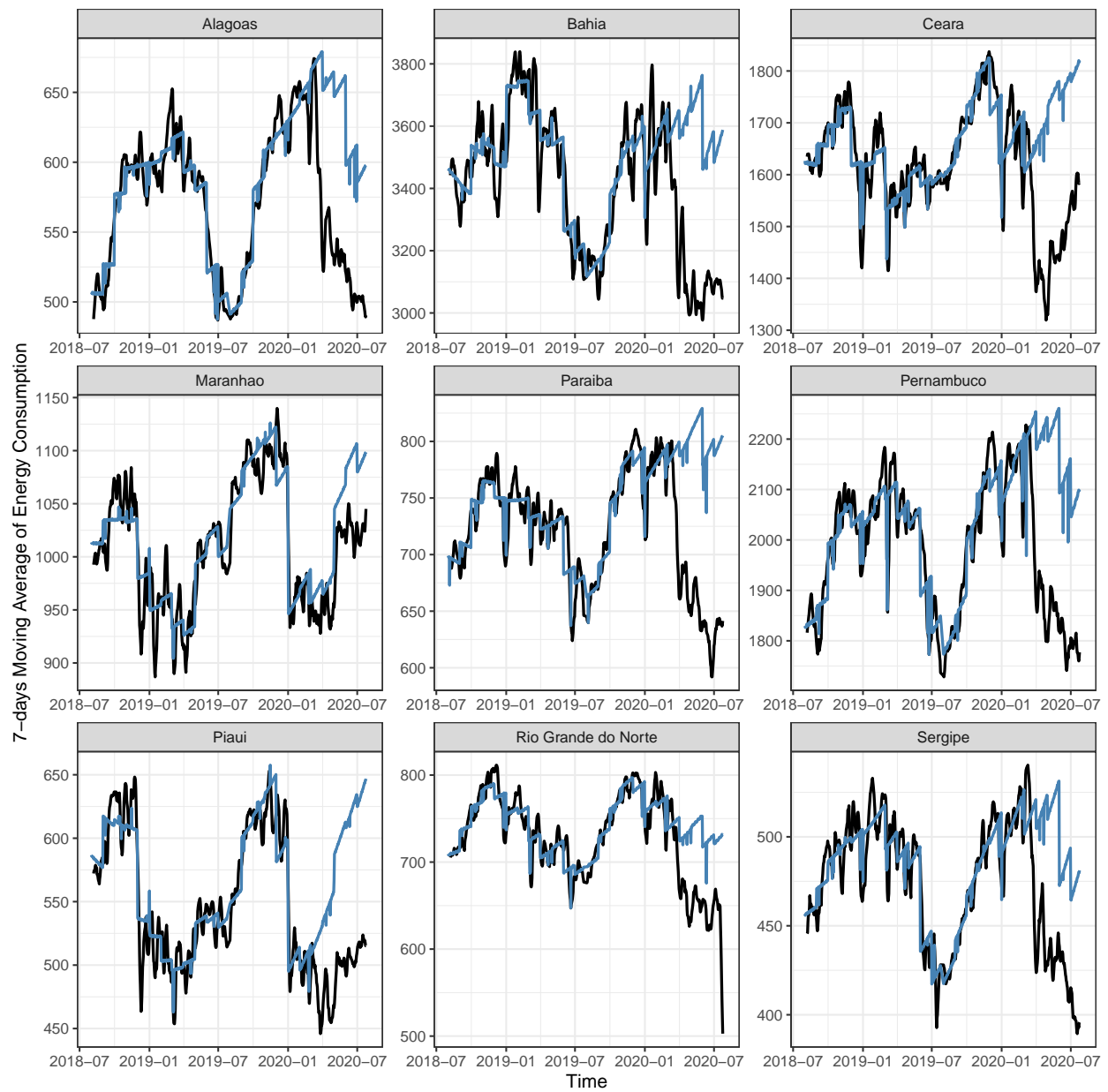
Região Centro-Oeste



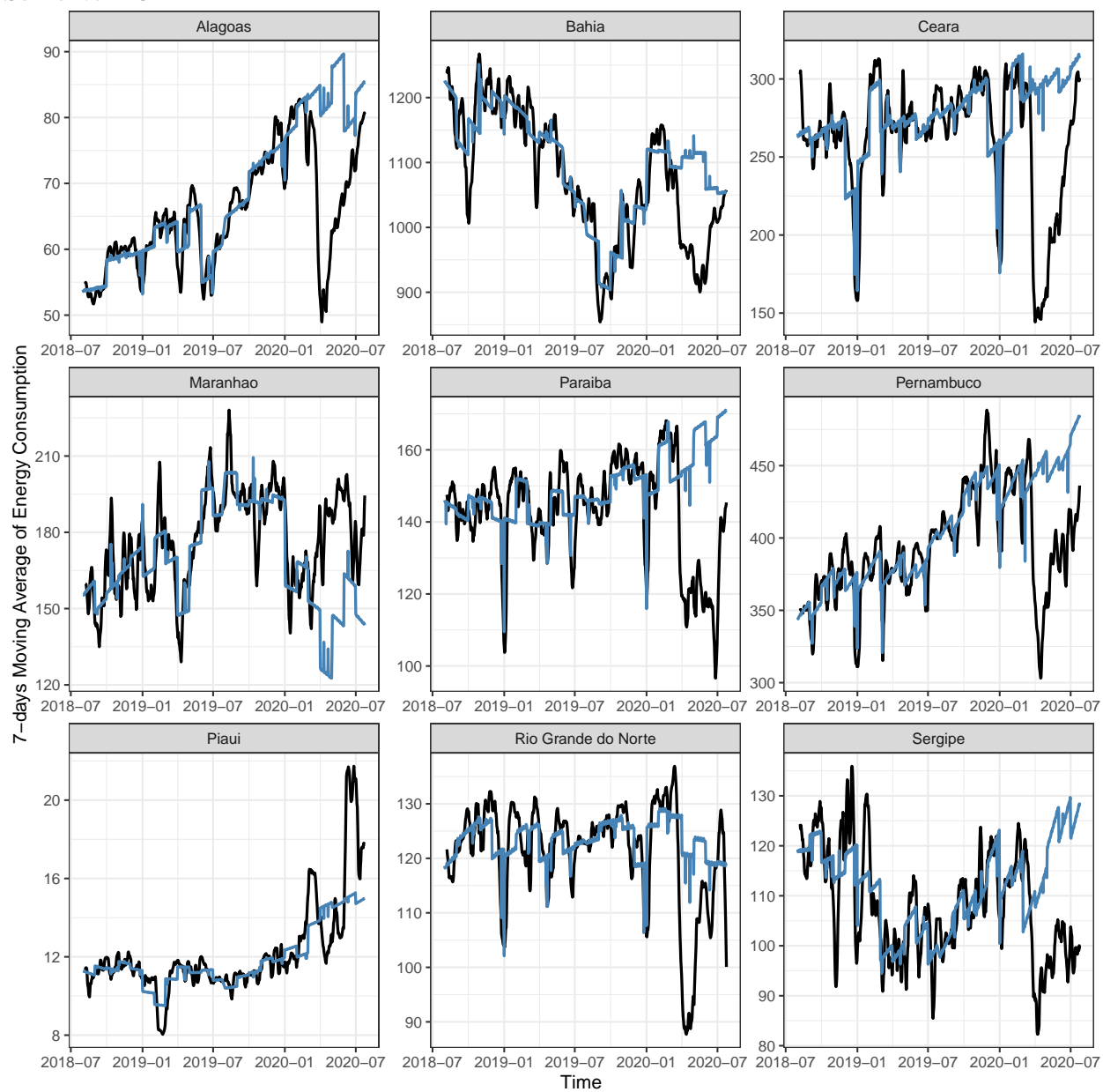
Somente ACL



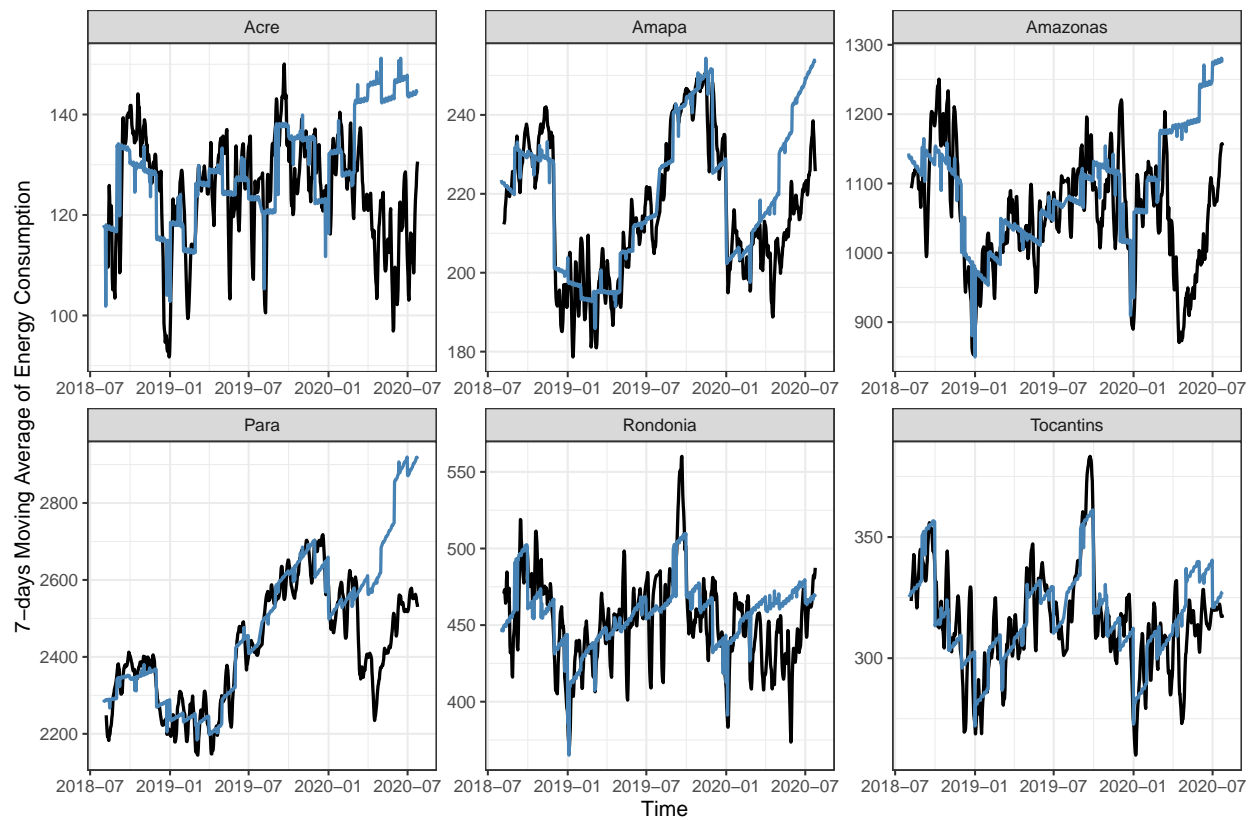
Região Nordeste



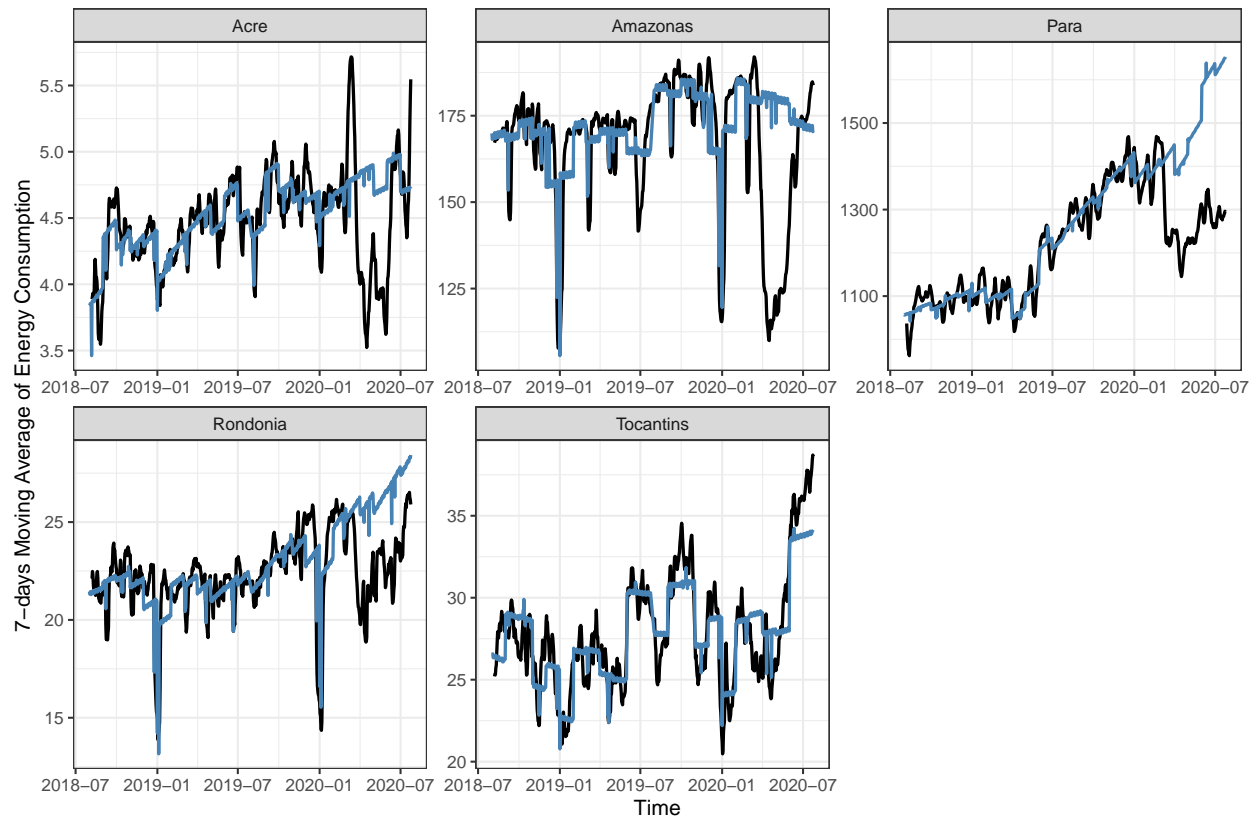
Somente ACL



Região Norte



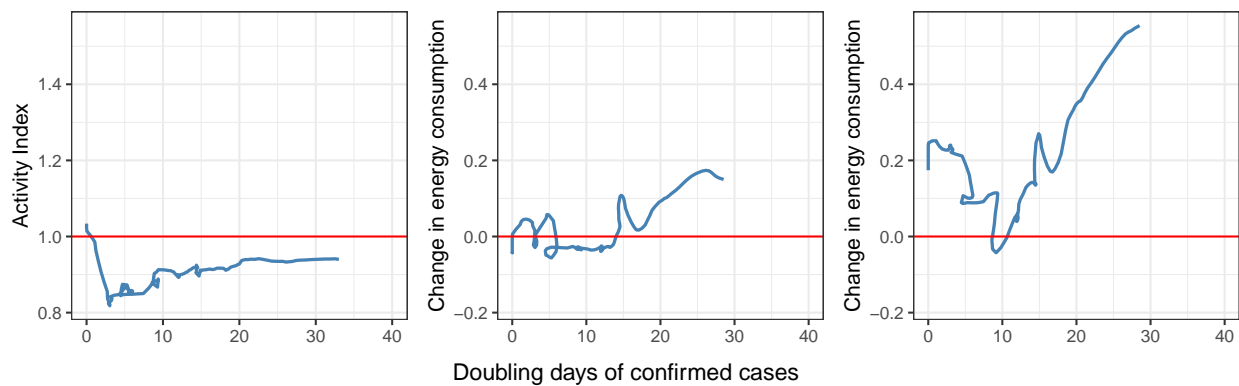
Somente ACL



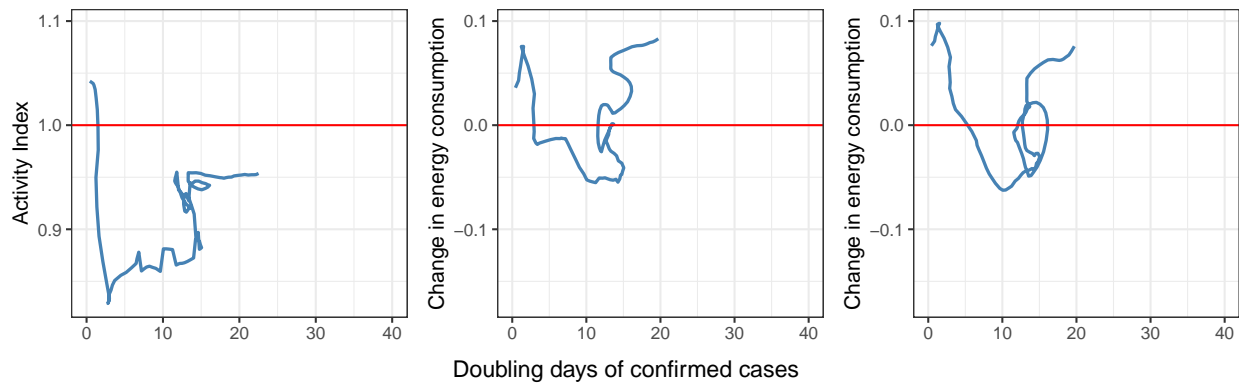
Atividade x COVID

Região Sudeste

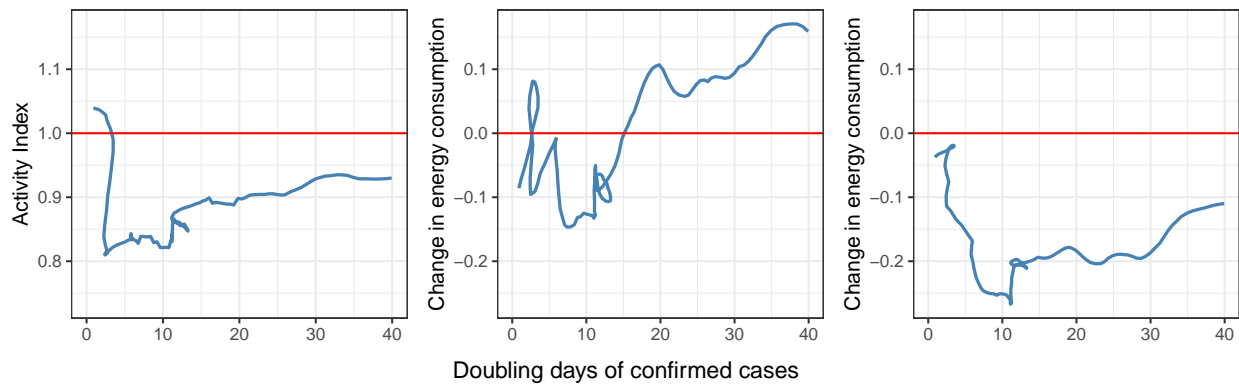
Espírito Santo

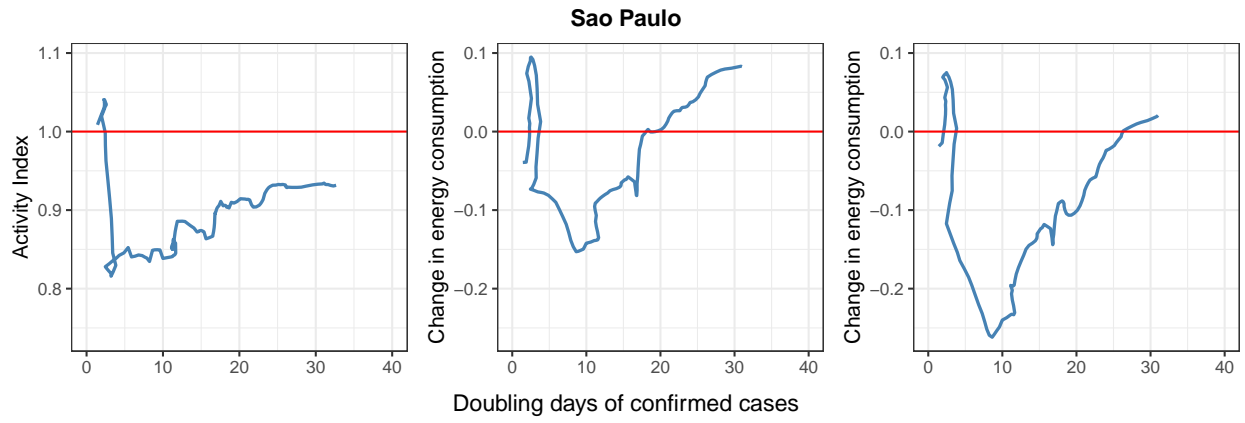


Minas Gerais



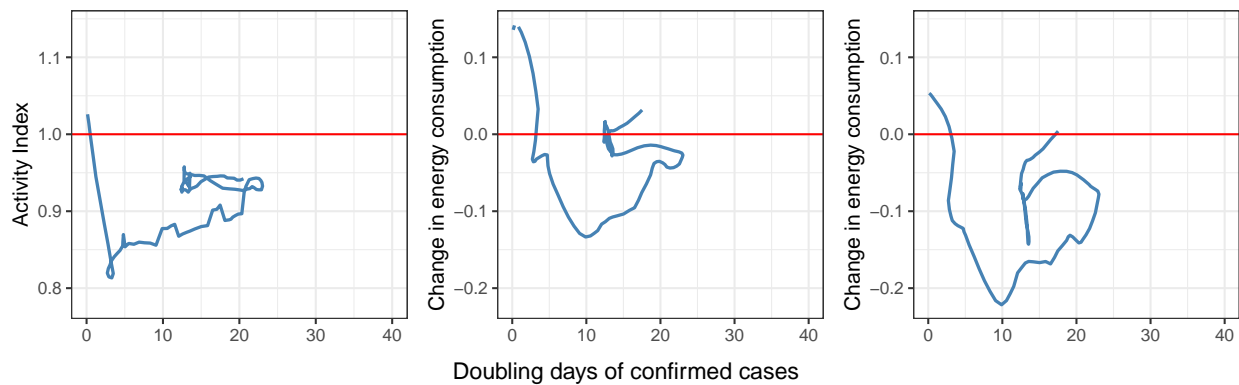
Rio de Janeiro



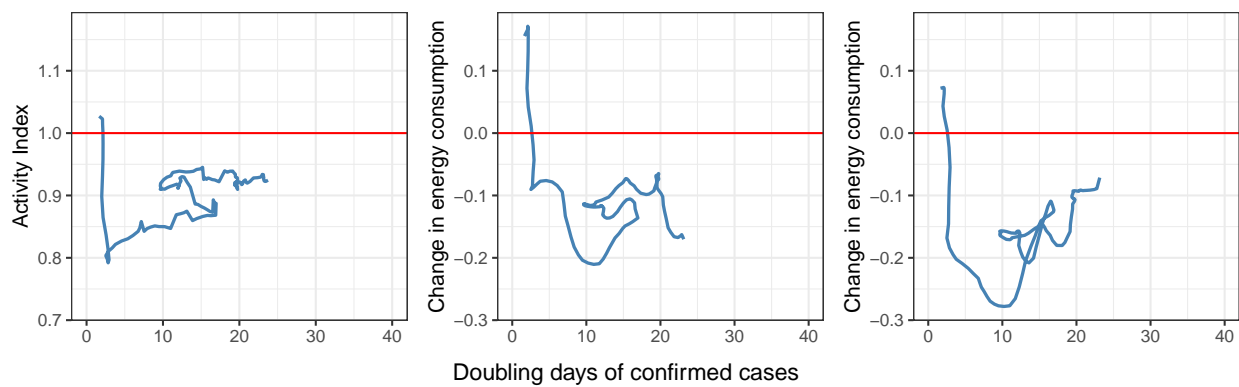


Região Sul

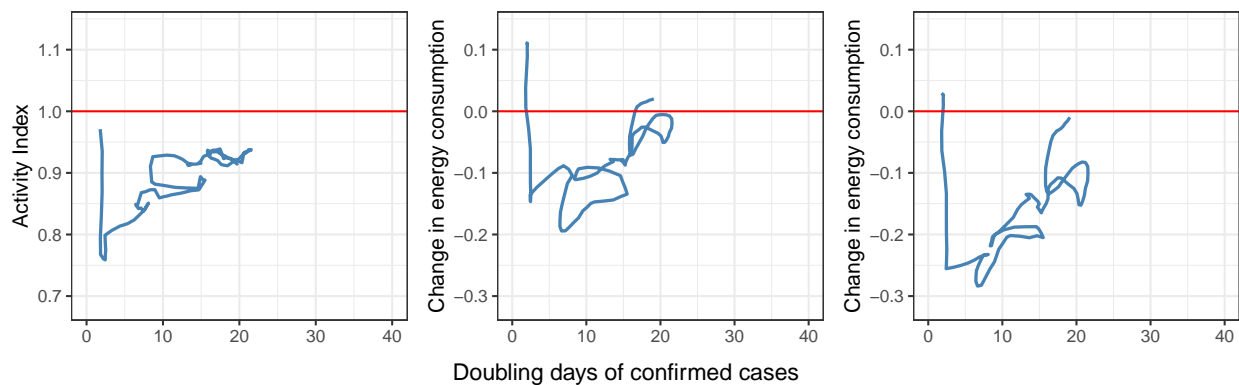
Parana



Rio Grande do Sul

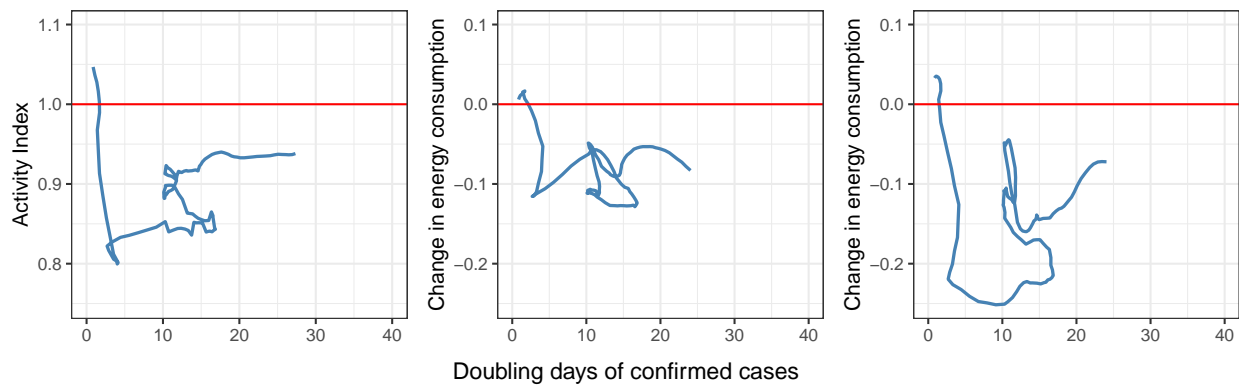


Santa Catarina

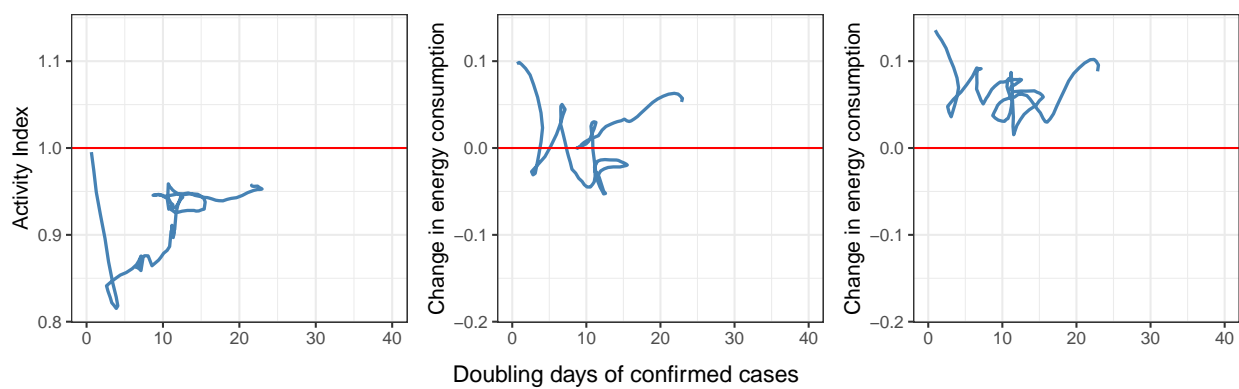


Região Centro-Oeste

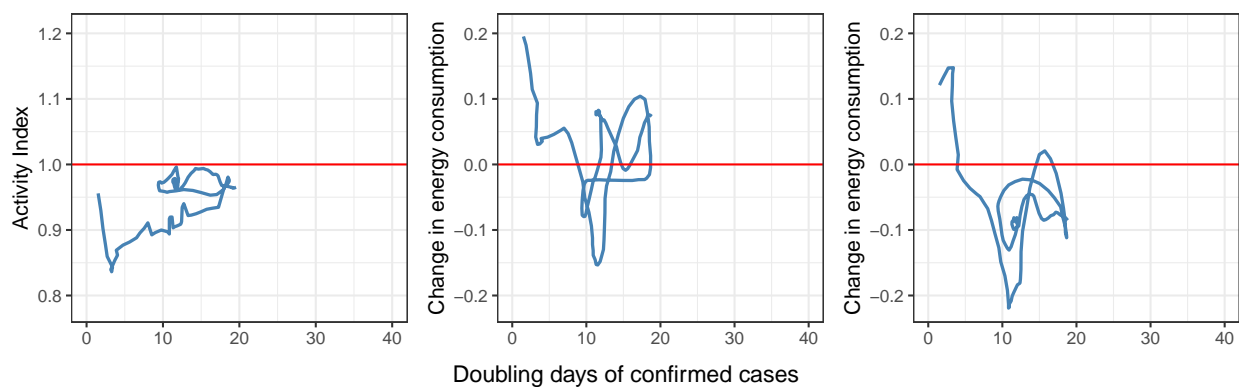
Distrito Federal



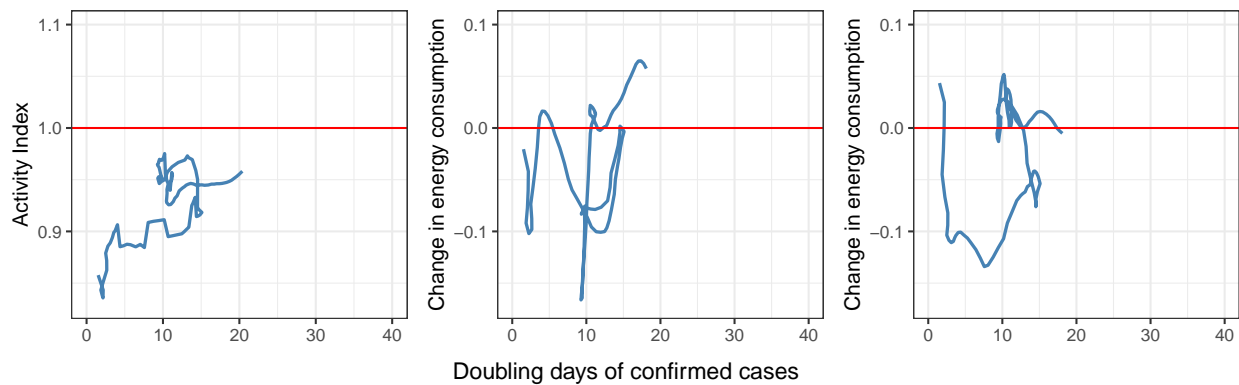
Goiás



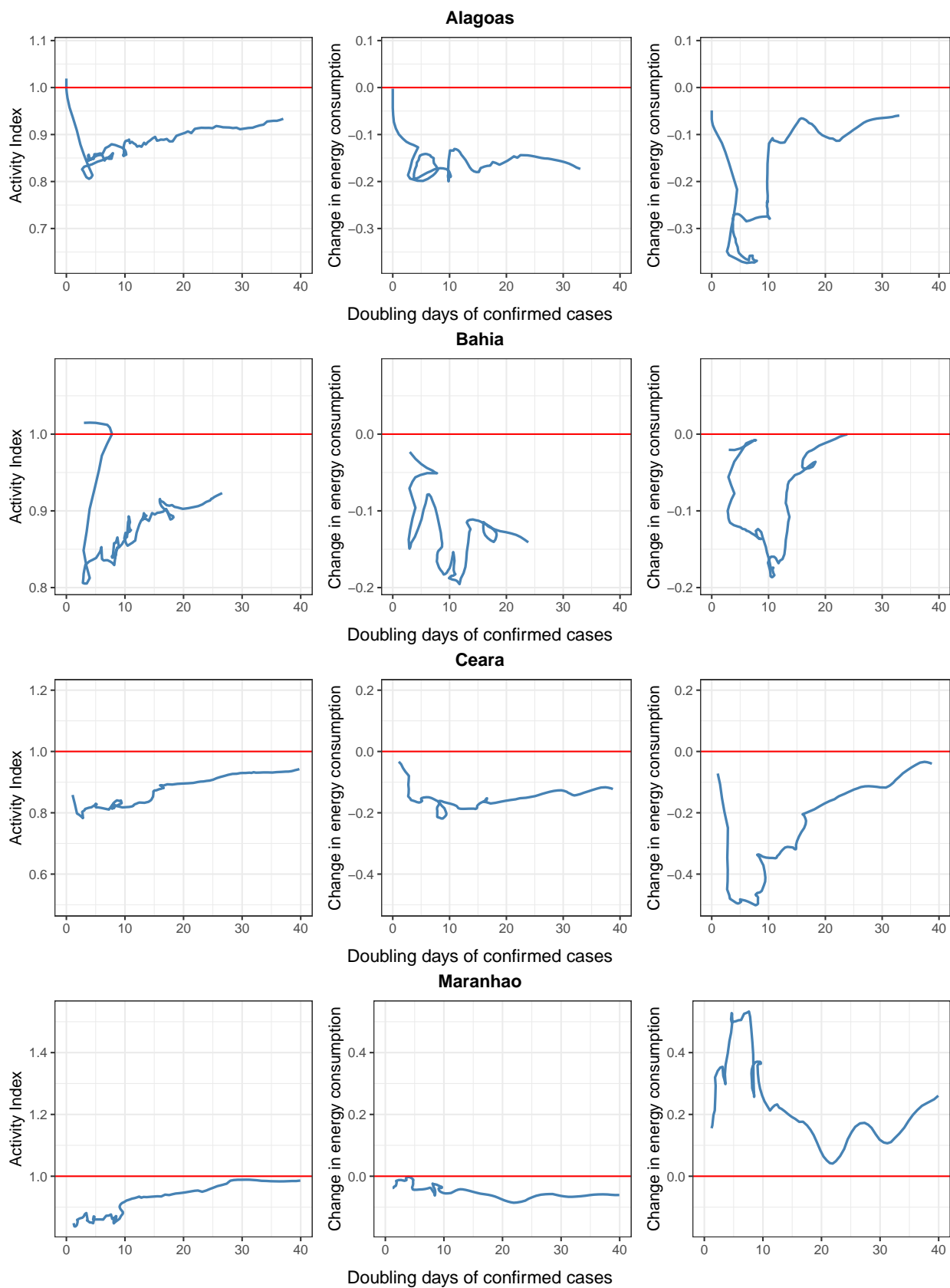
Mato Grosso do Sul

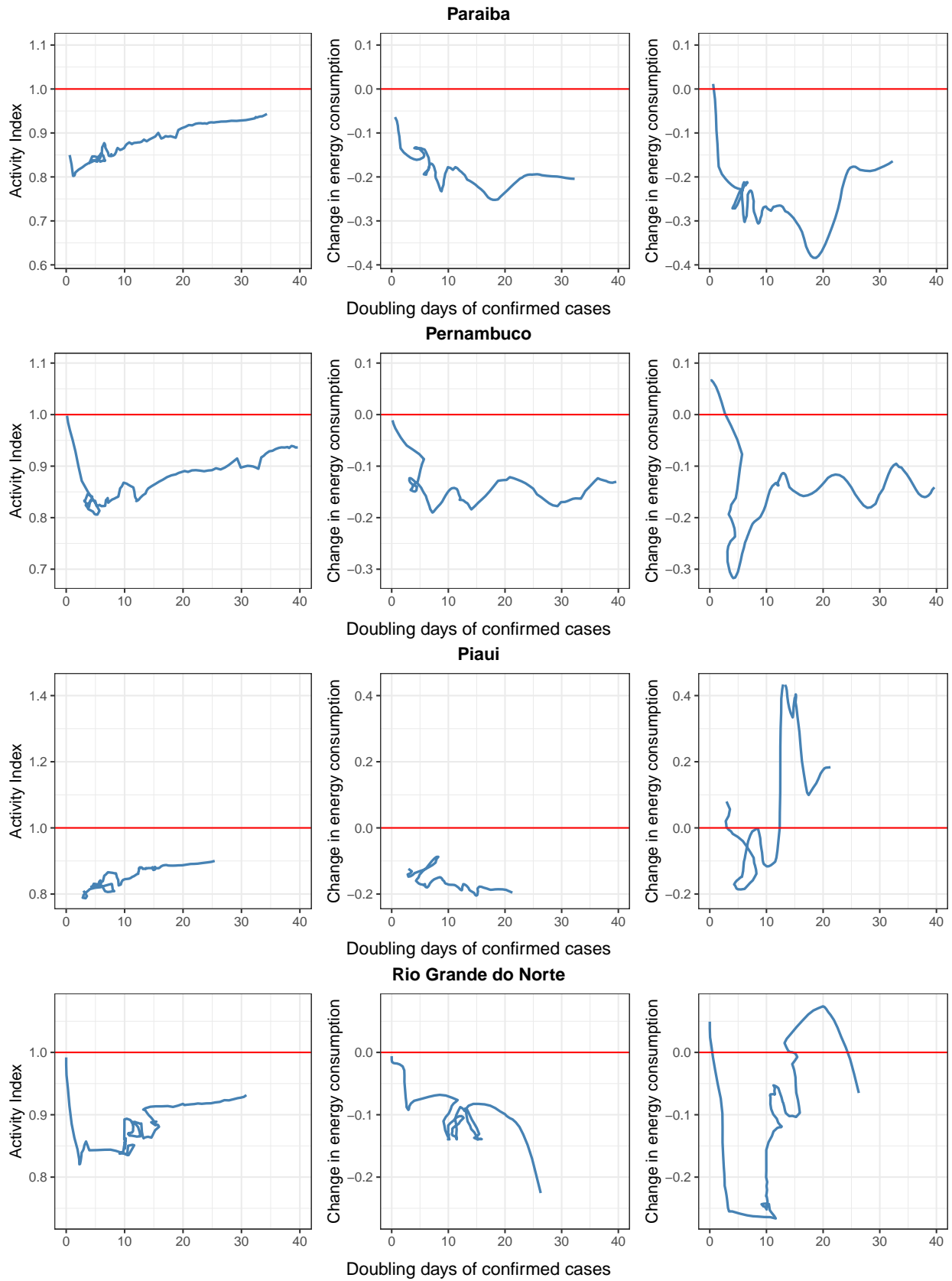


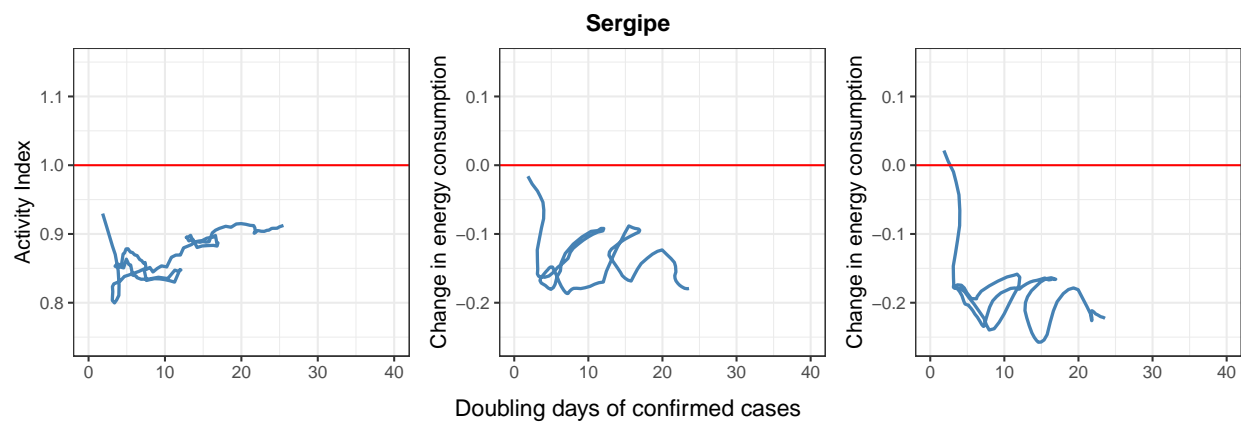
Mato Grosso



Região Nordeste

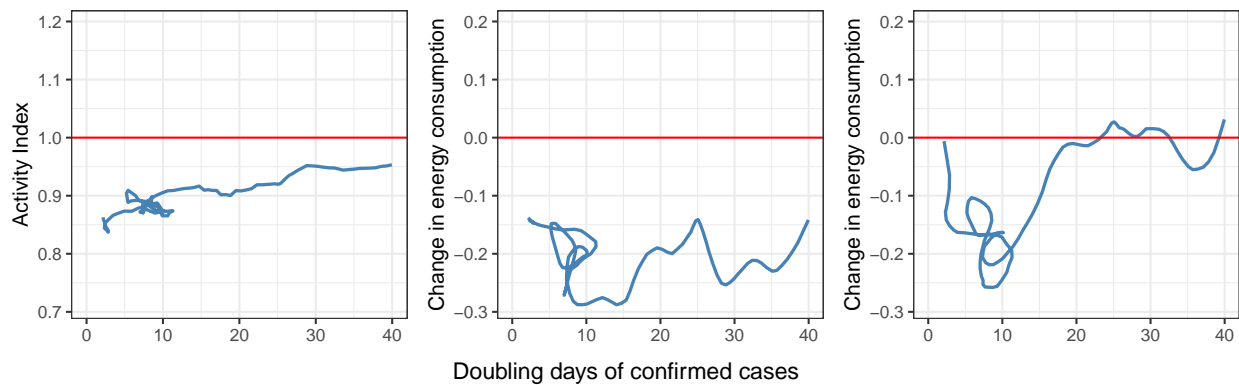




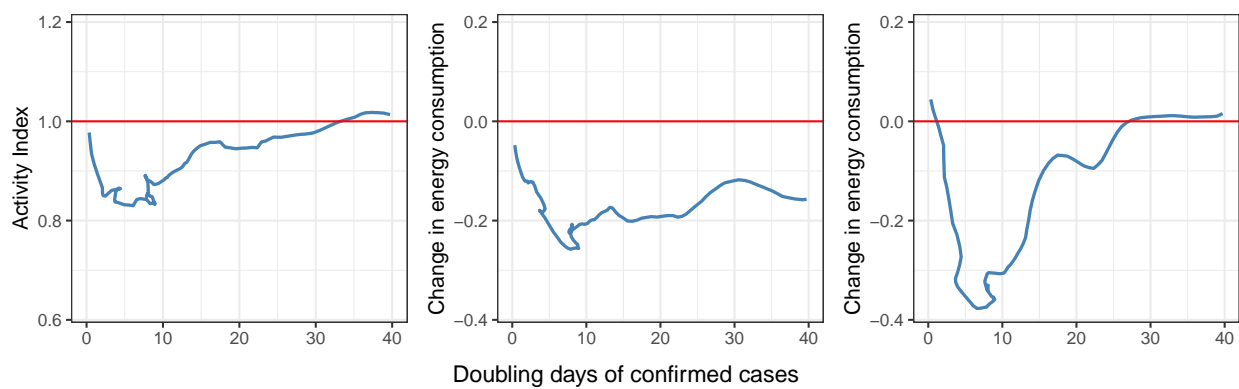


Região Norte

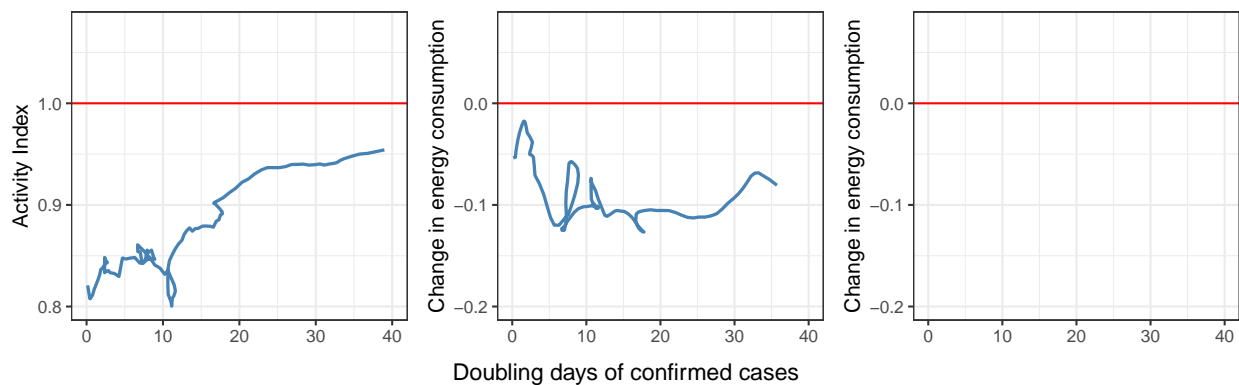
Acre



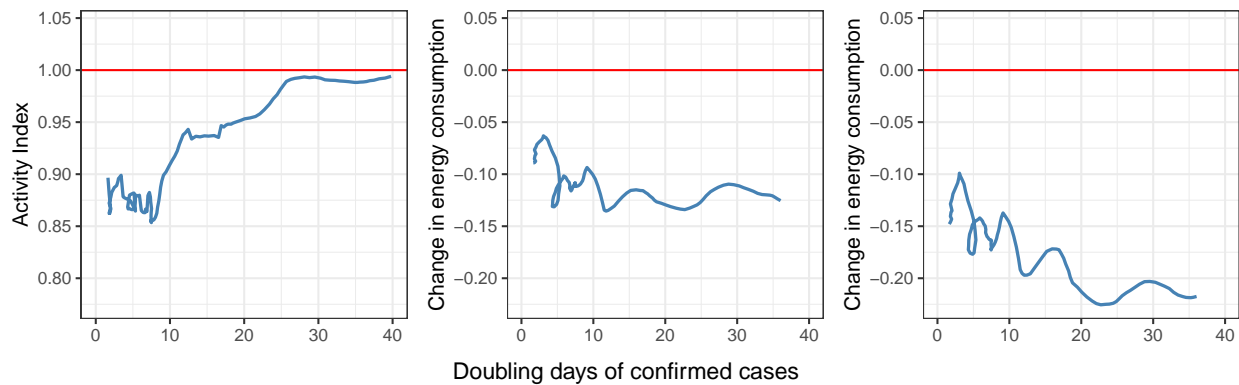
Amazonas

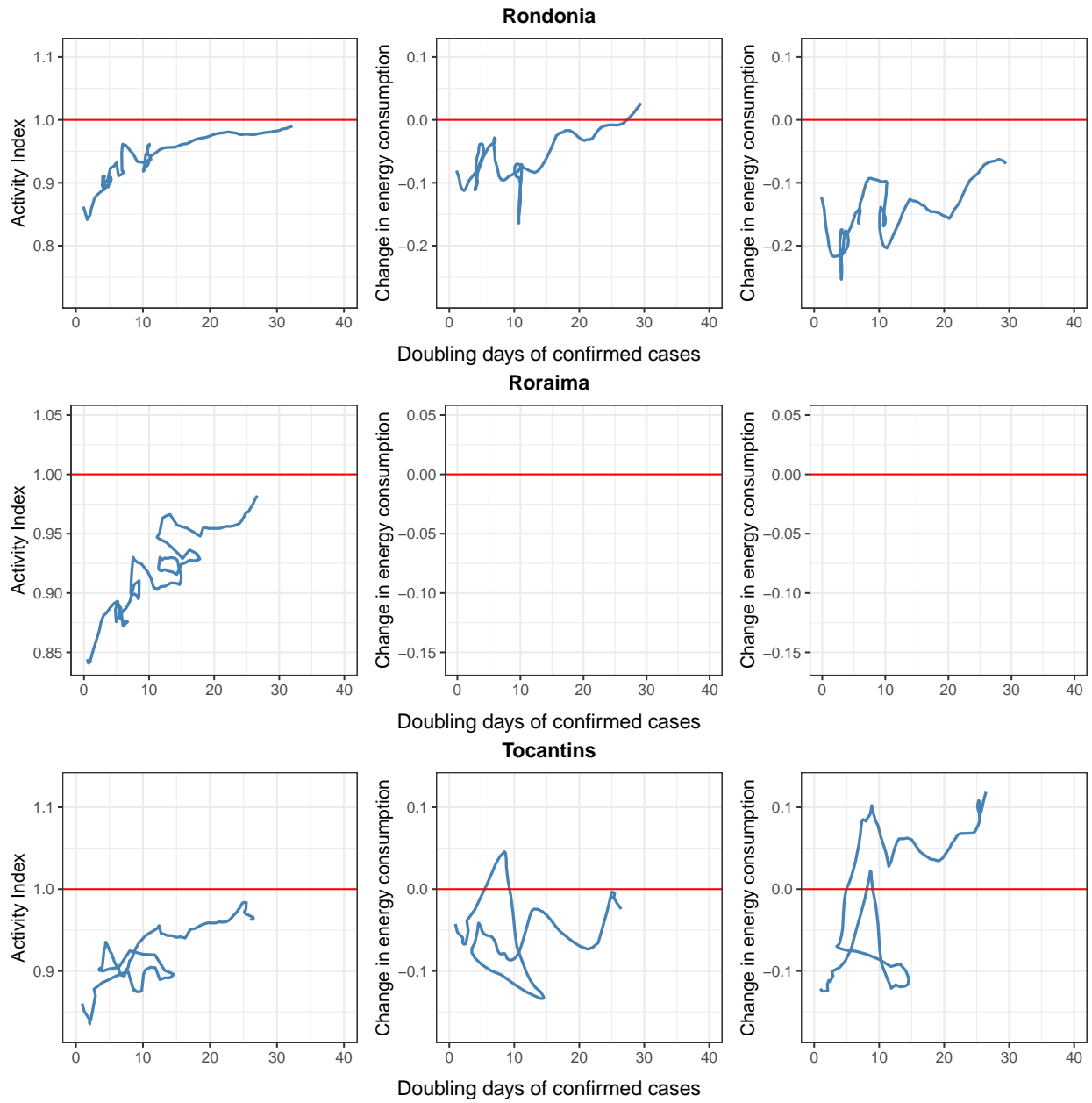


Amapá



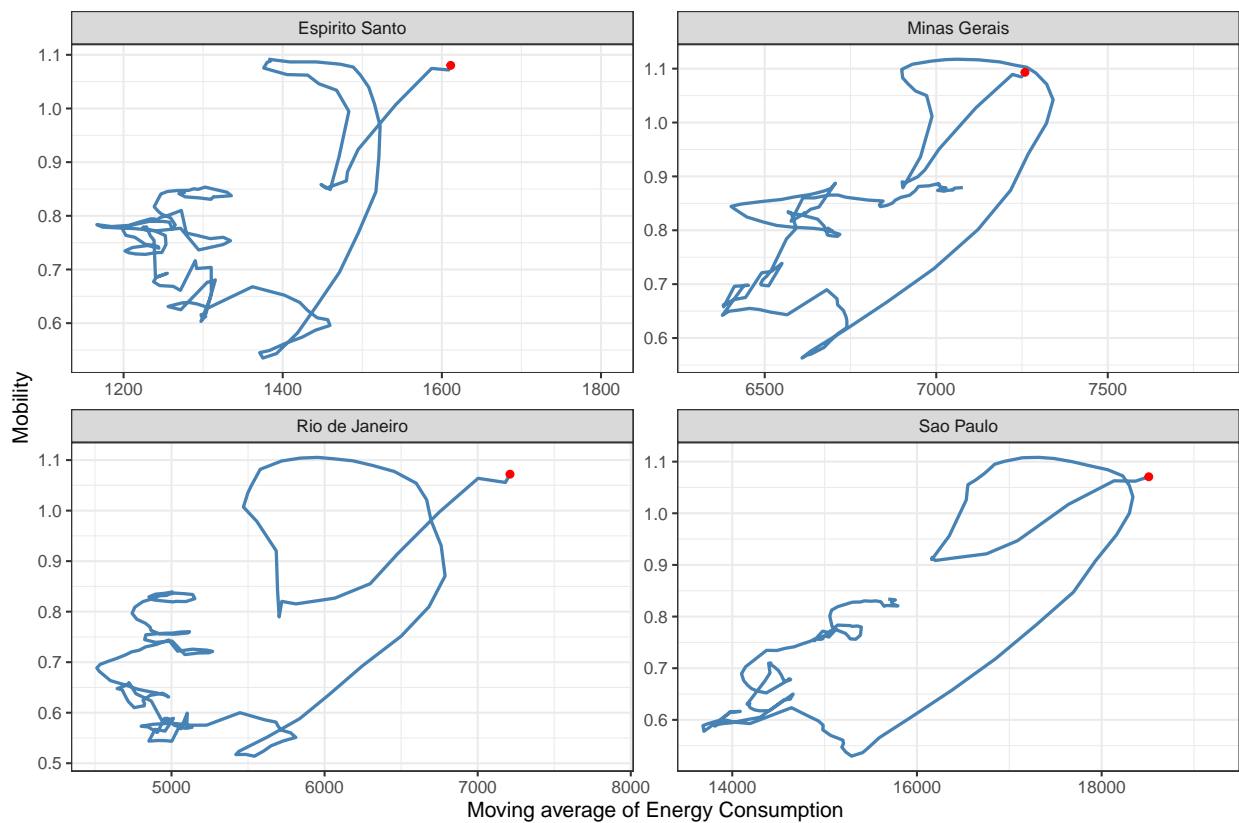
Para



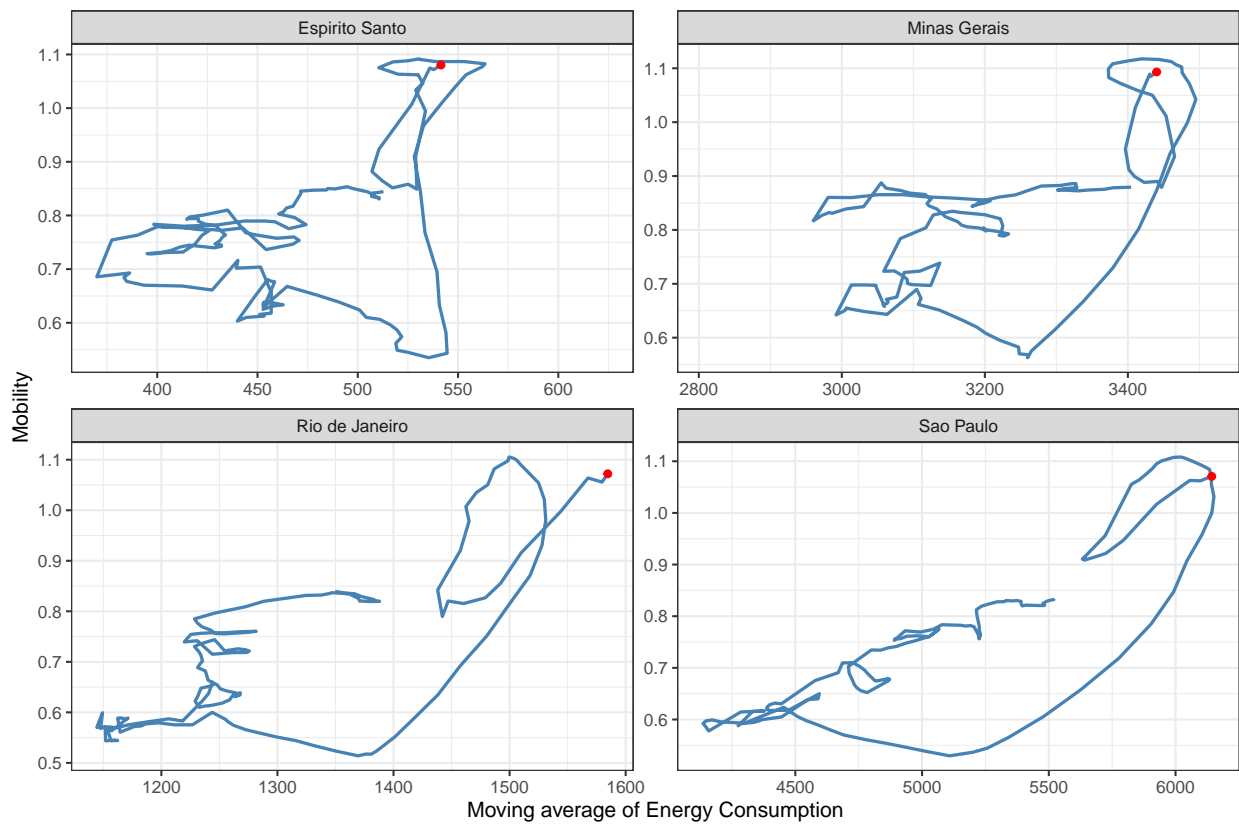


Relação Mobilidade x Consumo de Energia

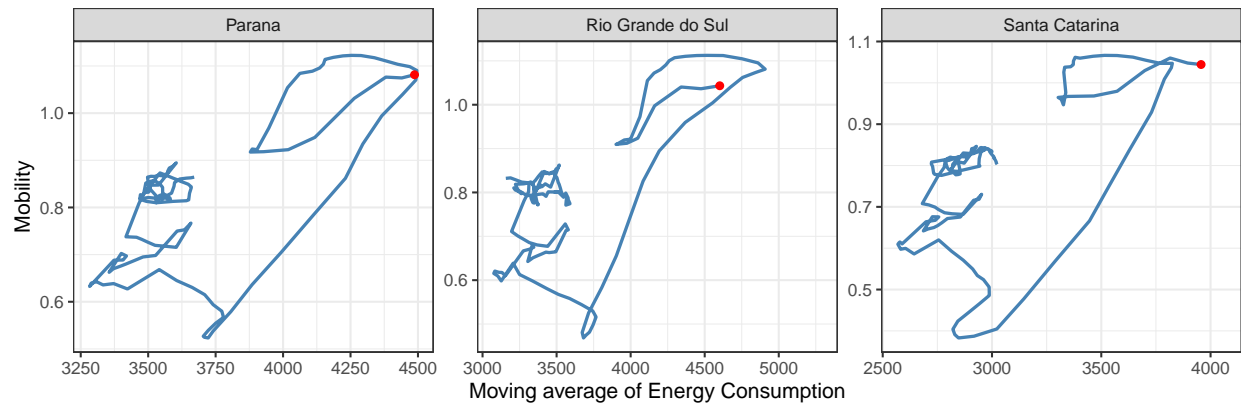
Região Sudeste



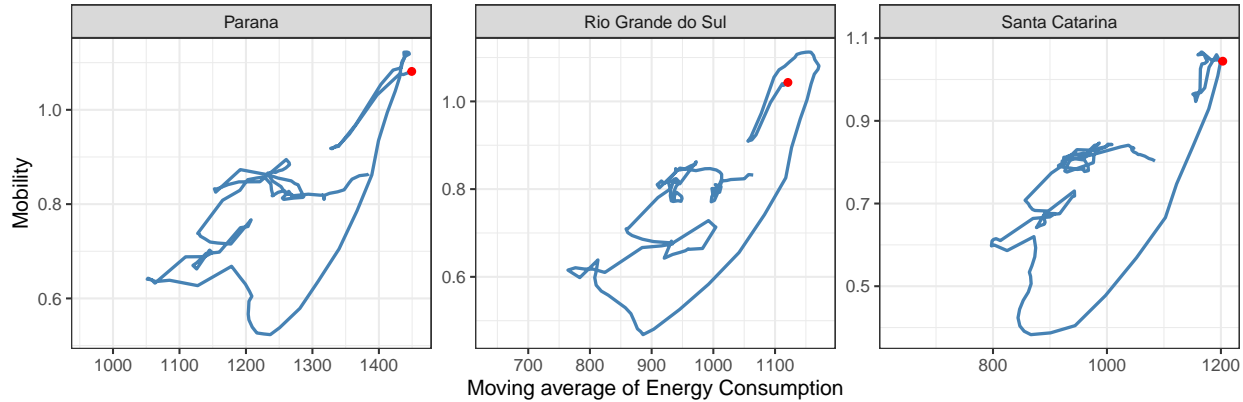
Somente ACL



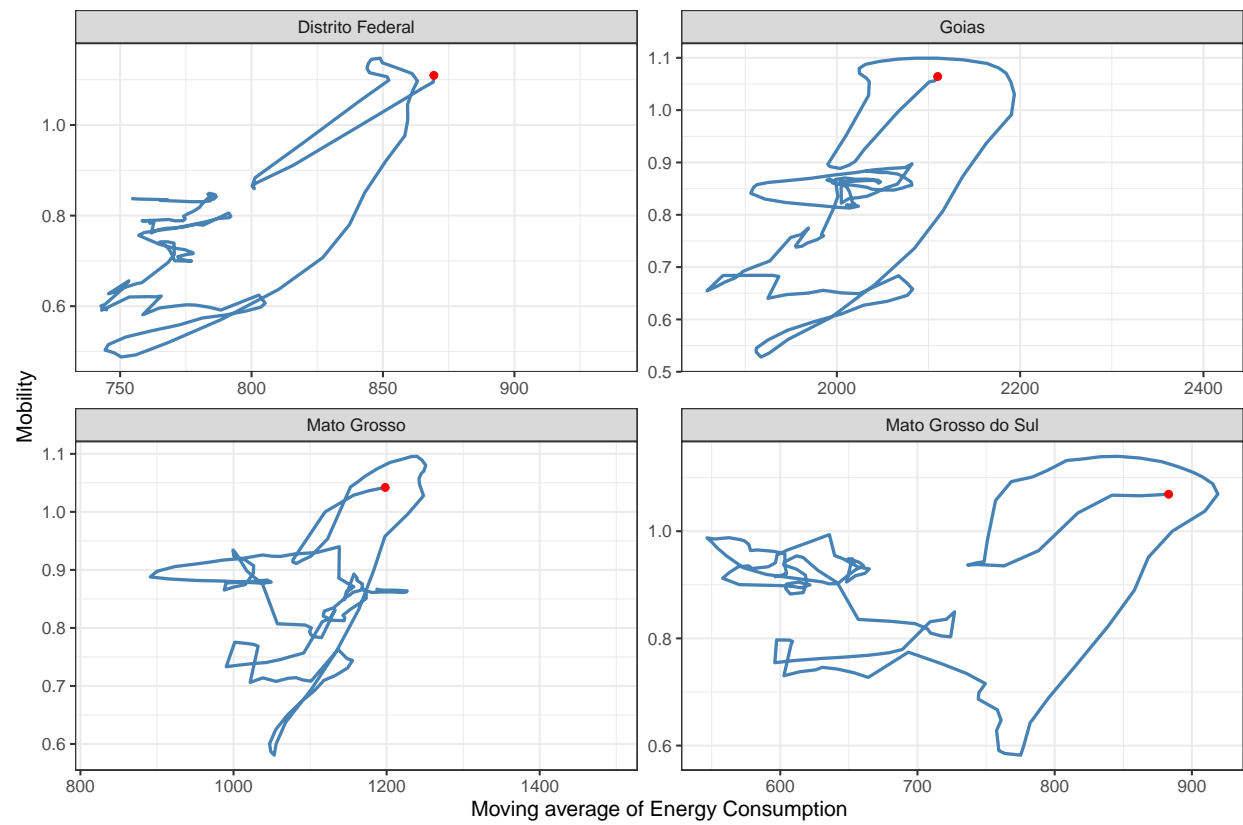
Região Sul



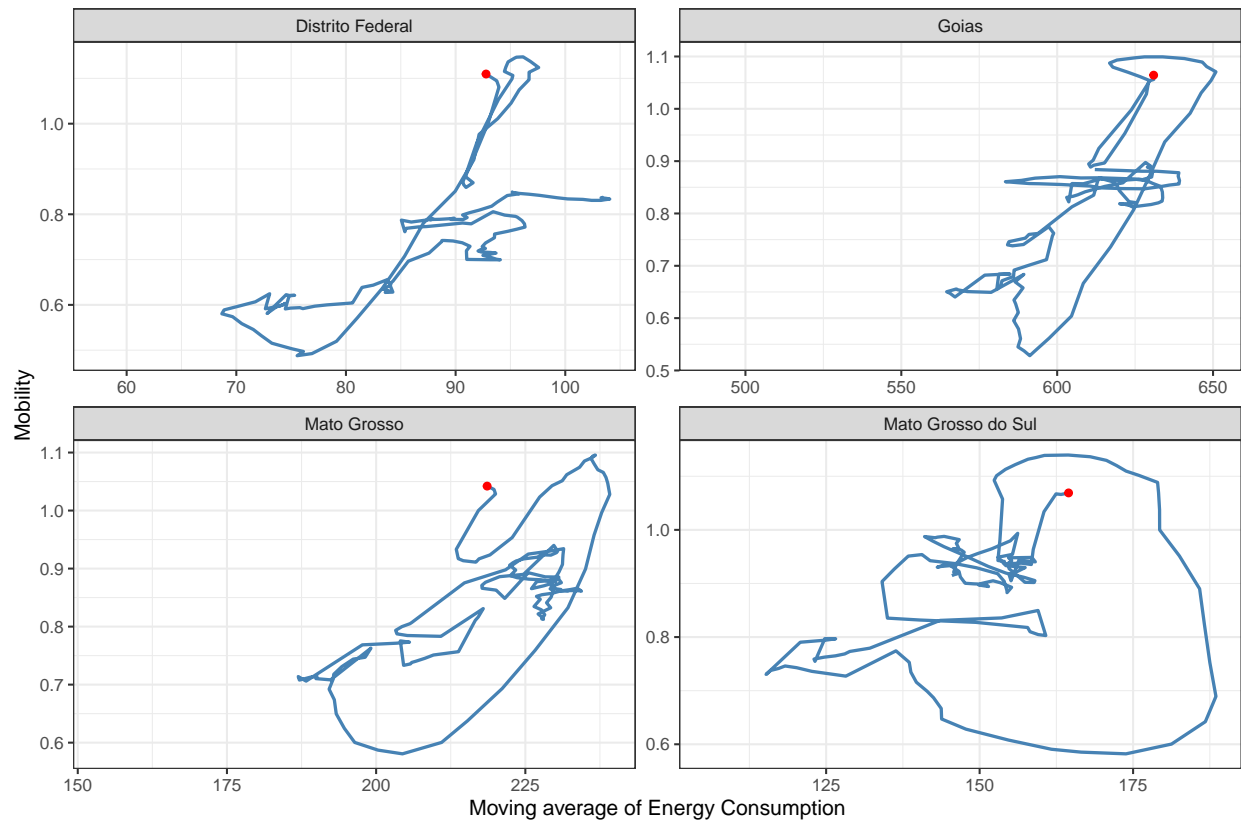
Somente ACL



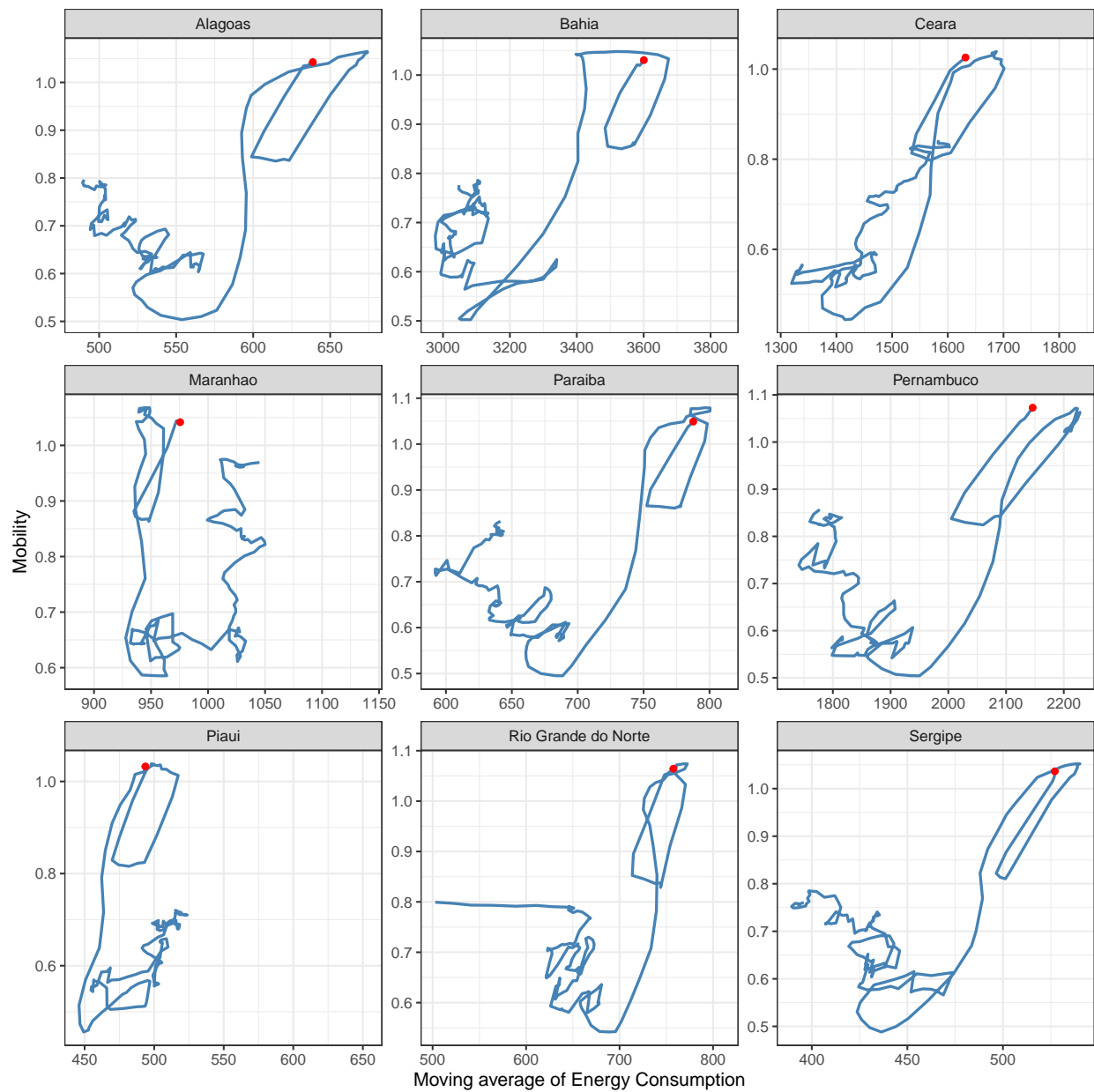
Região Centro-Oeste



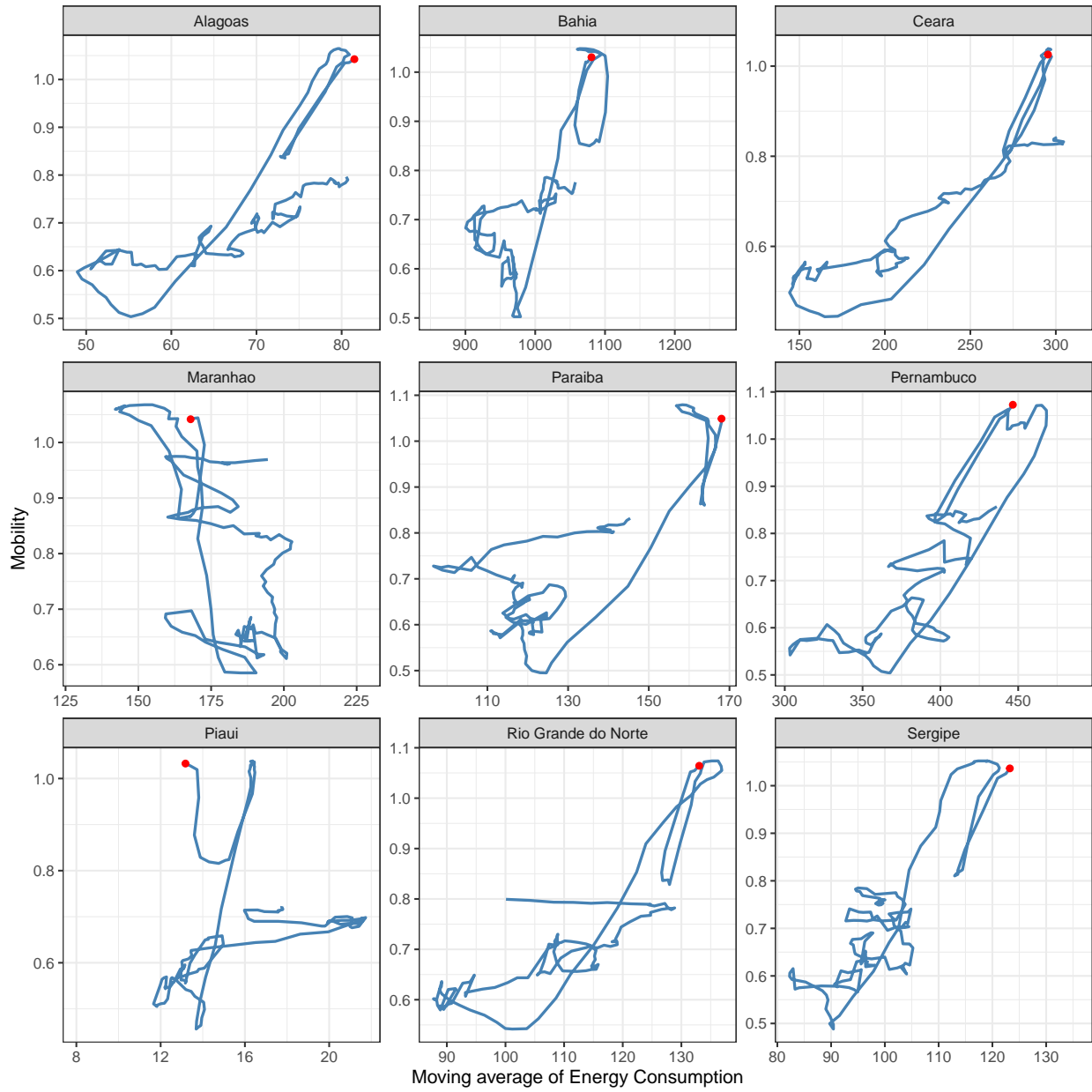
Somente ACL



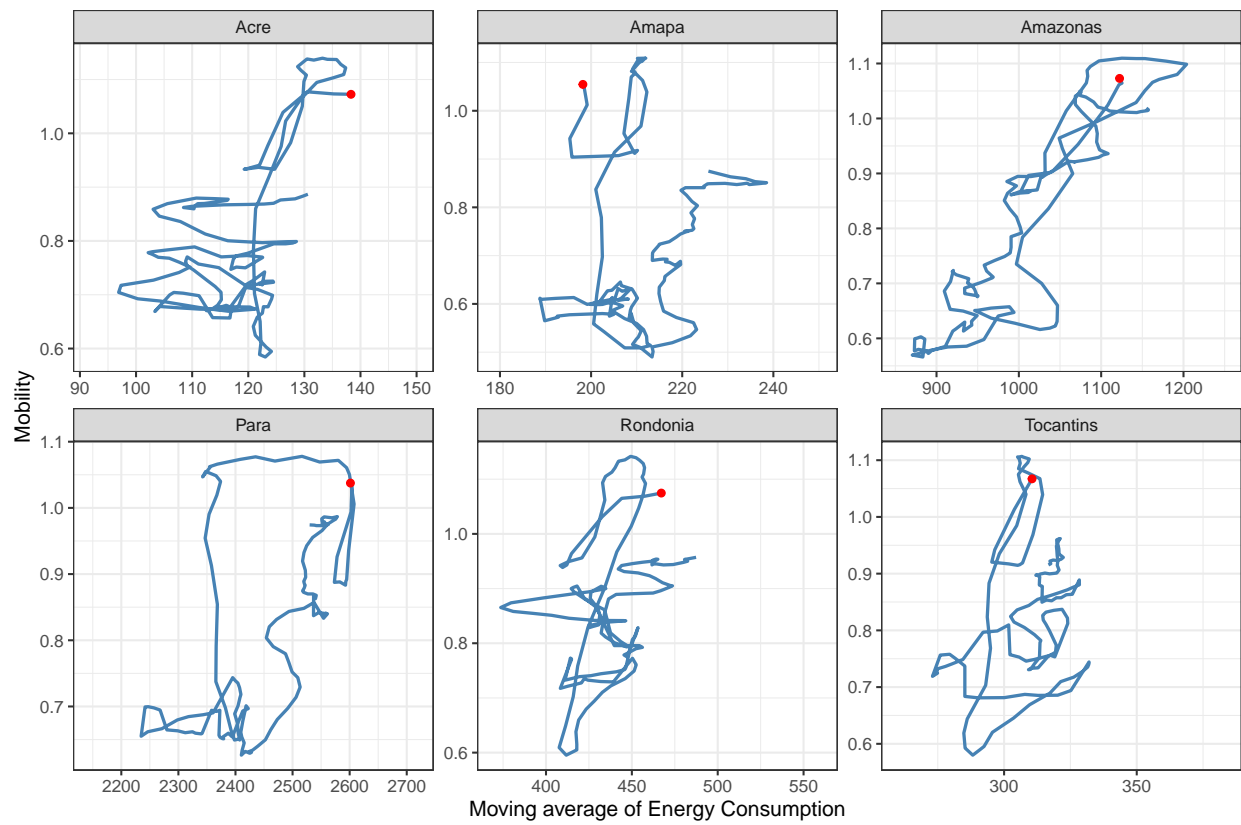
Região Nordeste



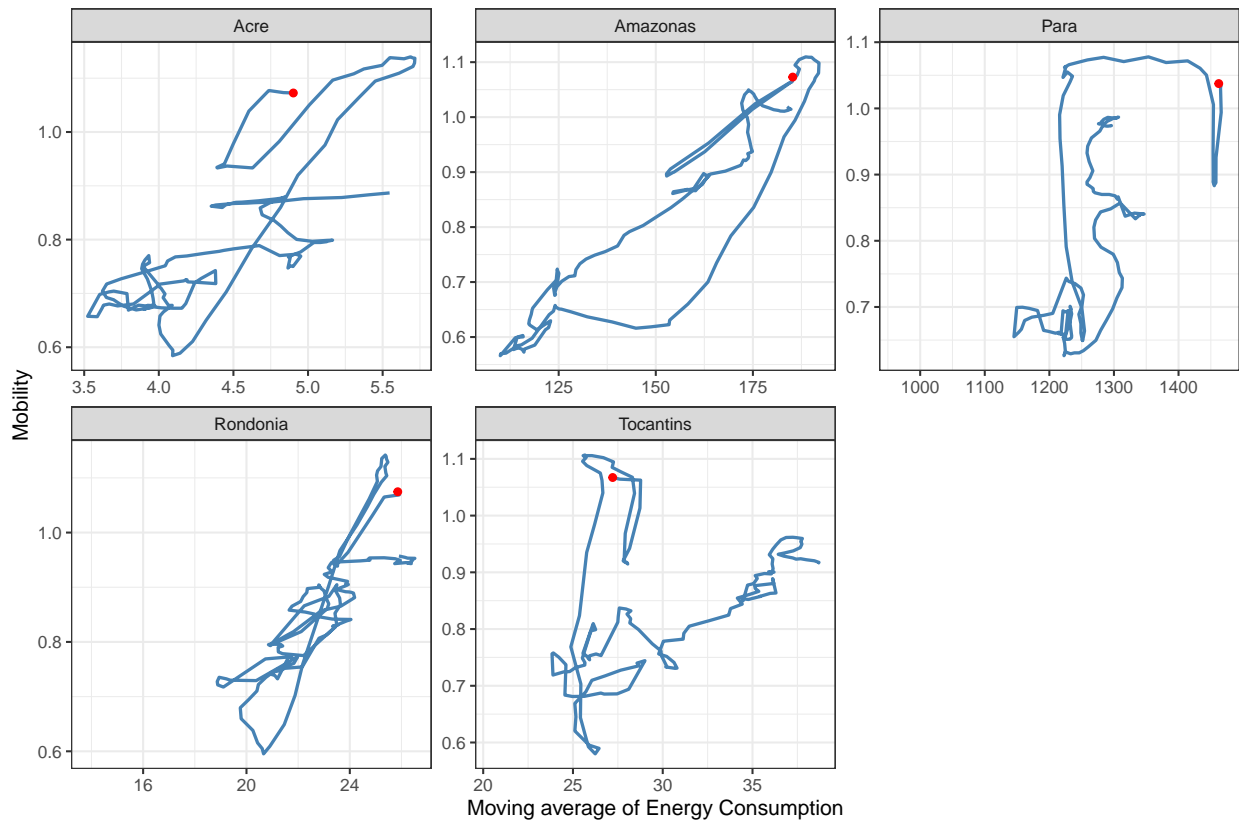
Somente ACL



Região Norte



Somente ACL



Relação entre Série de Energia e Composição do PIB?

