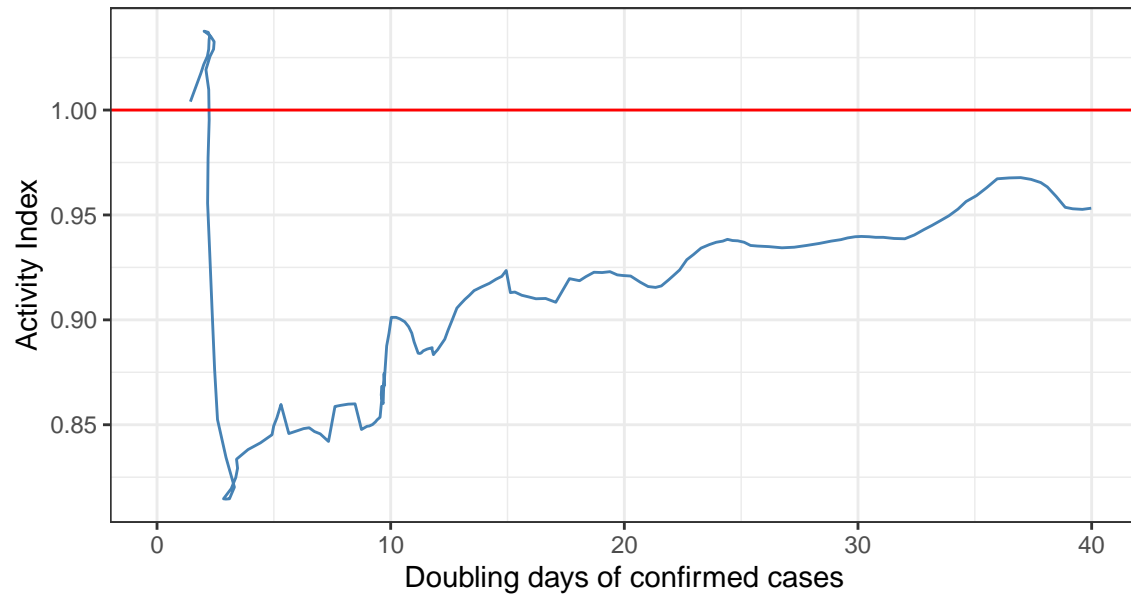


Atividade x COVID

Brasil



Usando dados de mobilidade e energia

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

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

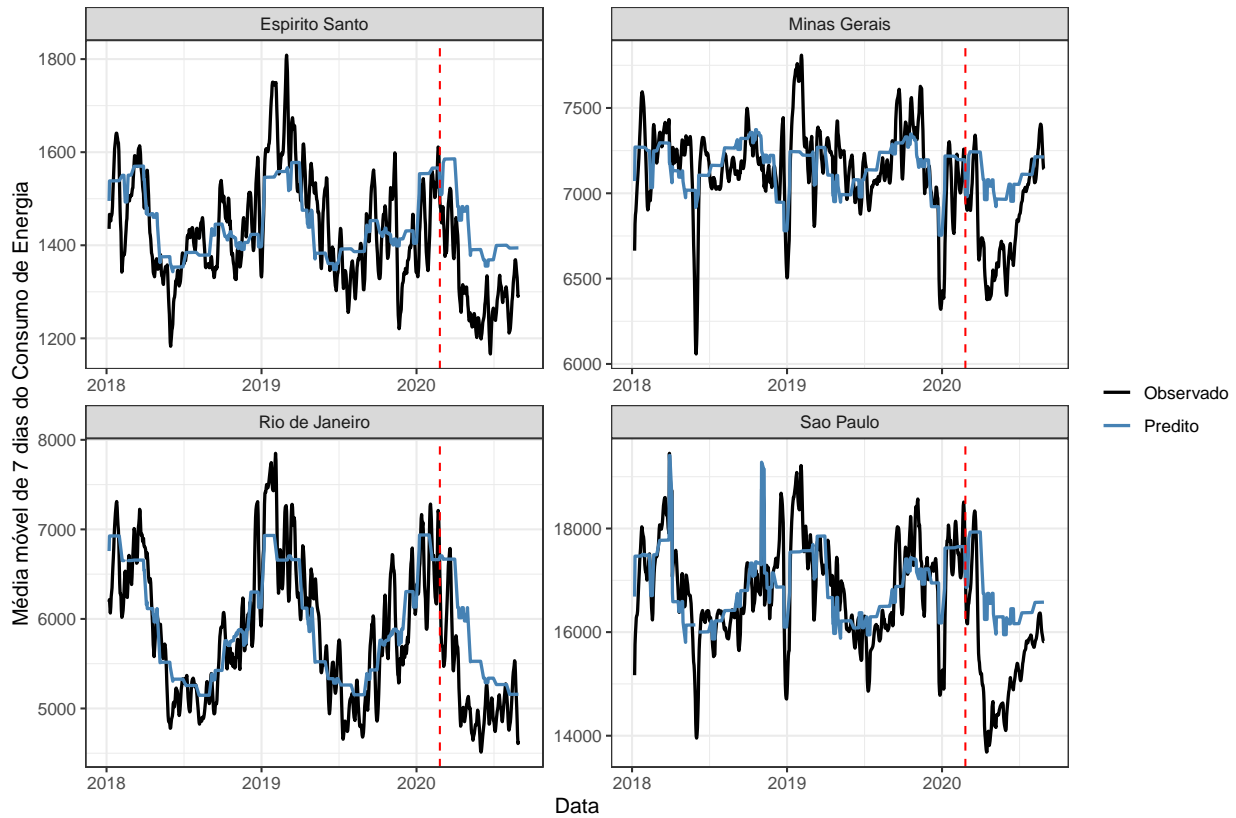
Para definir o contrafactual nos dados de energia, fazemos uma regressão para cada estado e ramo de atividade, com os dados de 08/2018 até 02/2020, da seguinte forma:

$$\begin{aligned} \text{Consumo Diário}_t = & \beta_0 + \sum_{i=2}^{12} \delta_i D_{\text{mês}_{it}} + \sum_{i=2}^7 \lambda_i D_{\text{dia da semana}_{it}} + \\ & + \sum_{i=2}^k \theta_i D_{\text{feriado}_{it}} + \phi t + \epsilon_t \end{aligned} \quad (1)$$

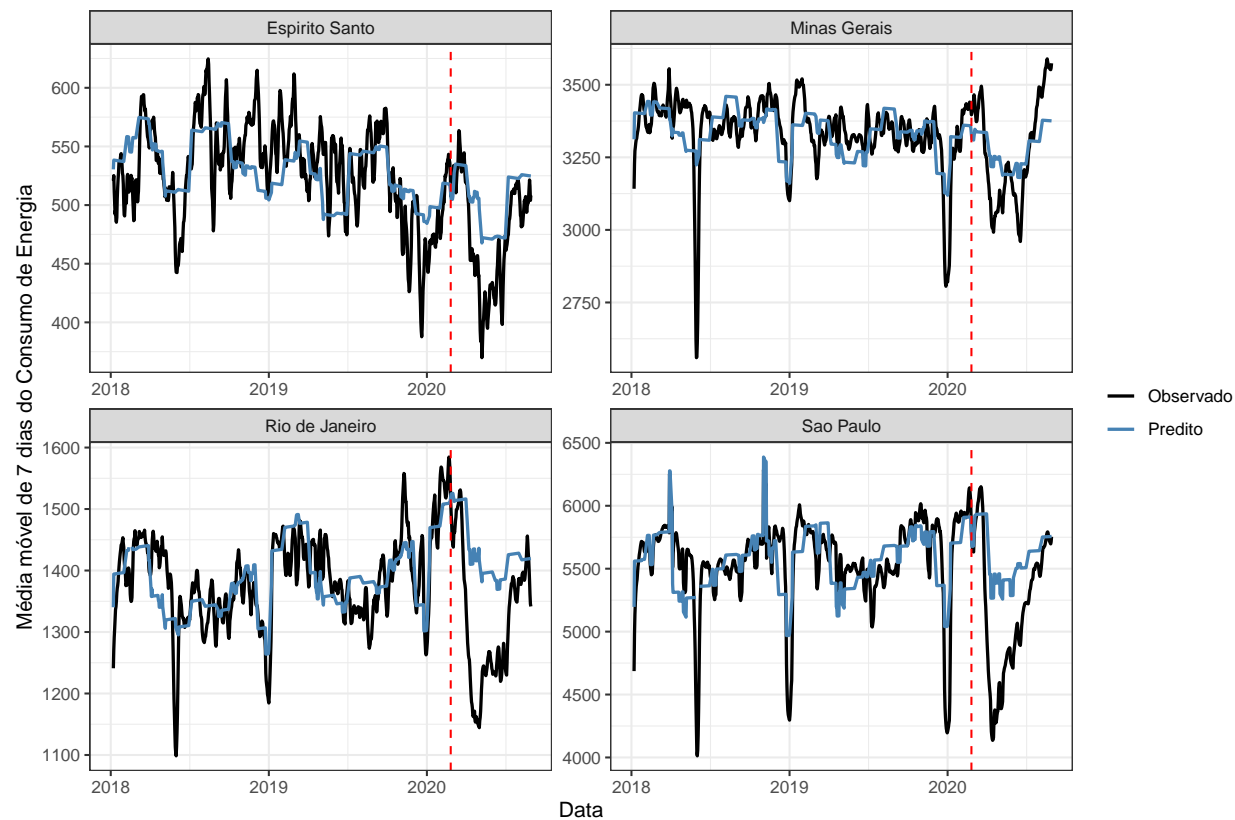
A partir de 1, usamos os valores preditos para os dados a partir de Março de 2020 como o esperado para o consumo de energia. A diferença percentual mostrada nos gráficos abaixo se baseia nesses valores.

Testando o fit nos dados de energia

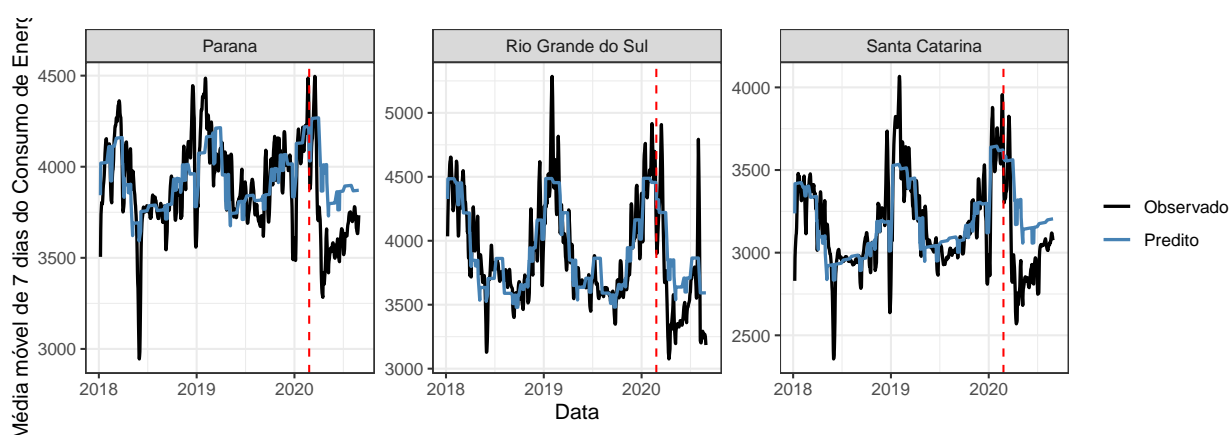
Região Sudeste



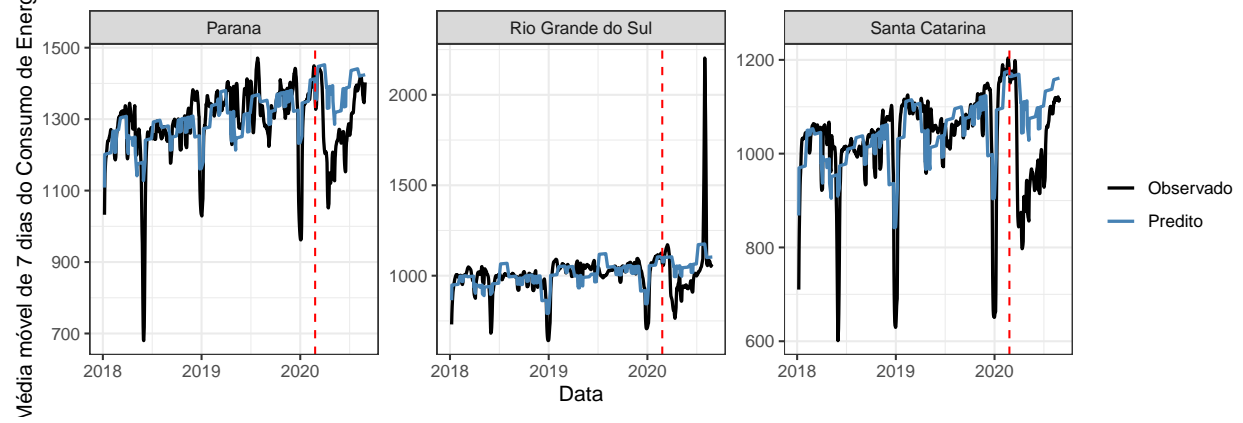
Somente ACL



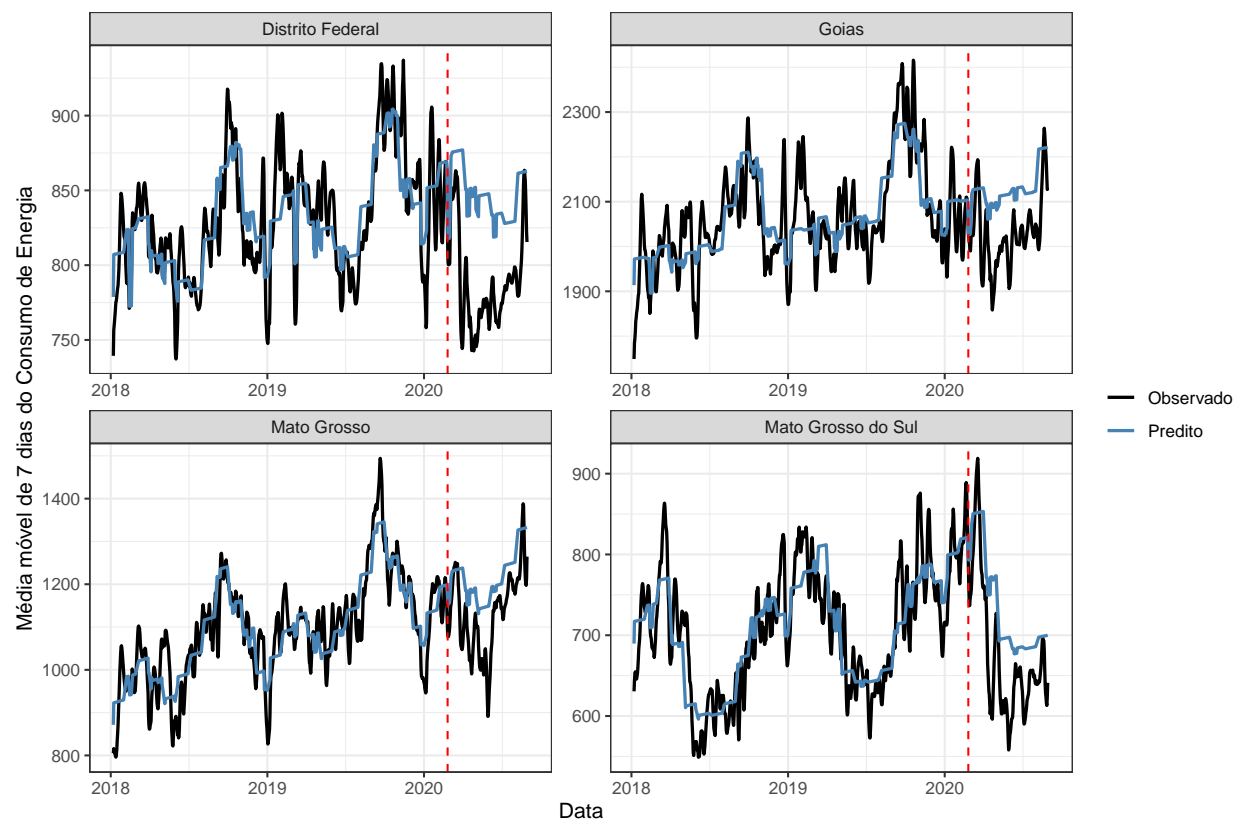
Região Sul



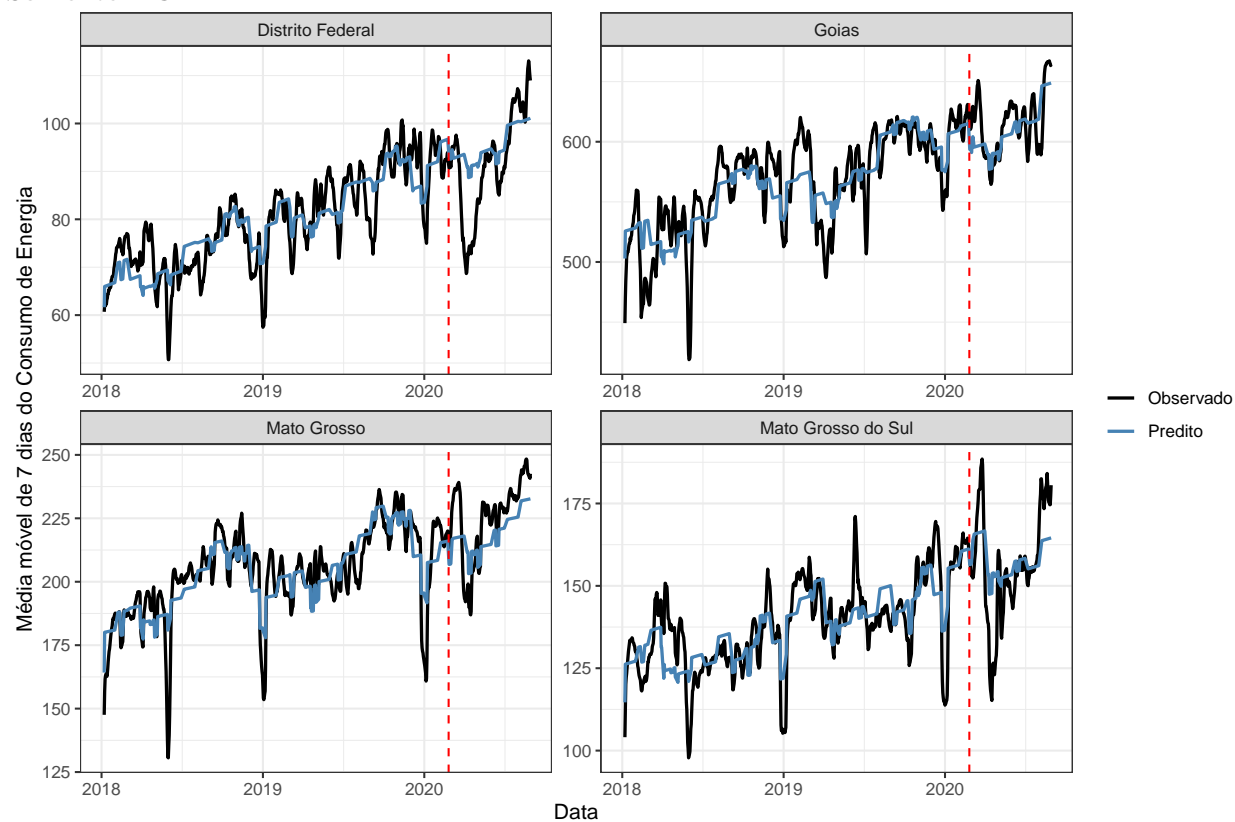
Somente ACL



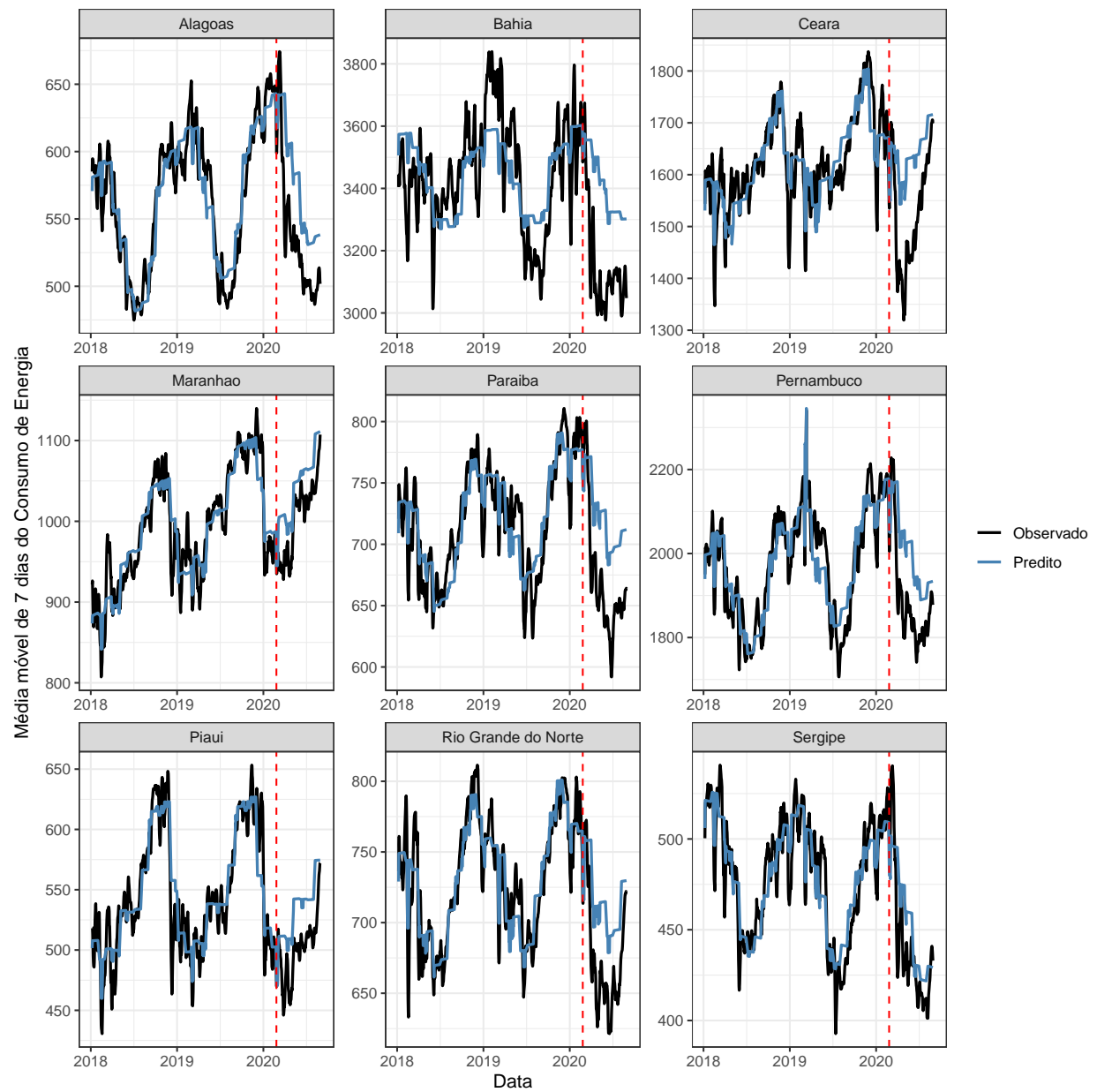
Região Centro-Oeste



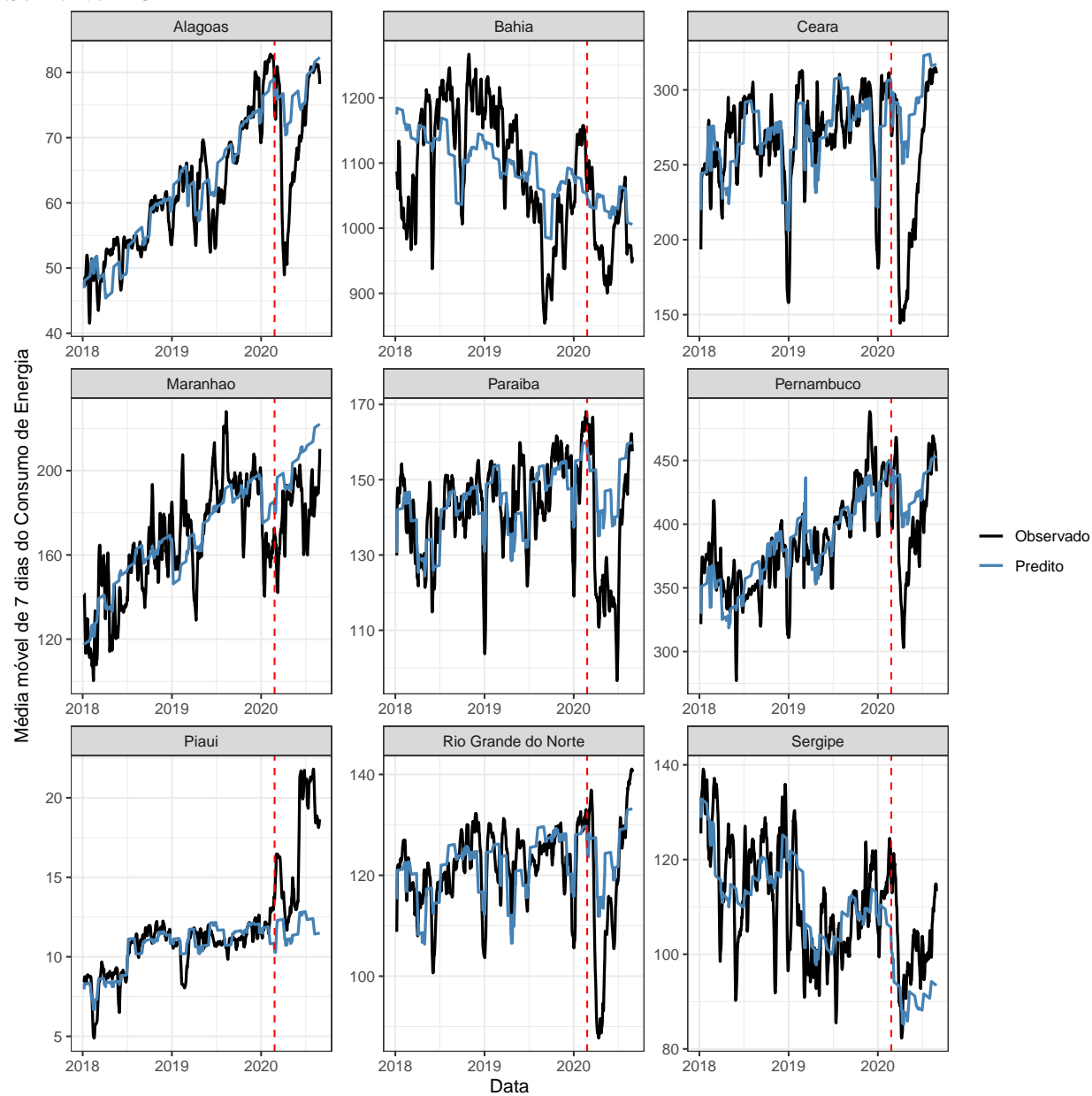
Somente ACL



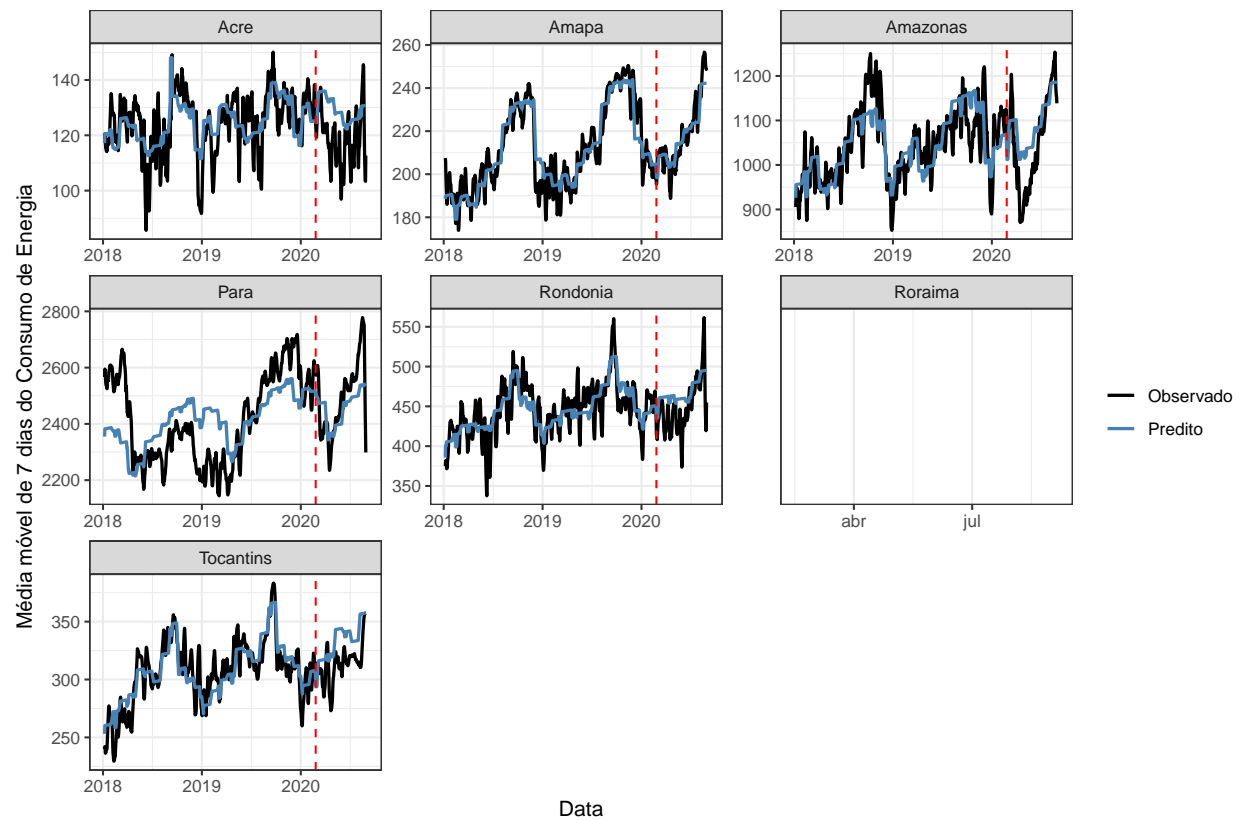
Região Nordeste



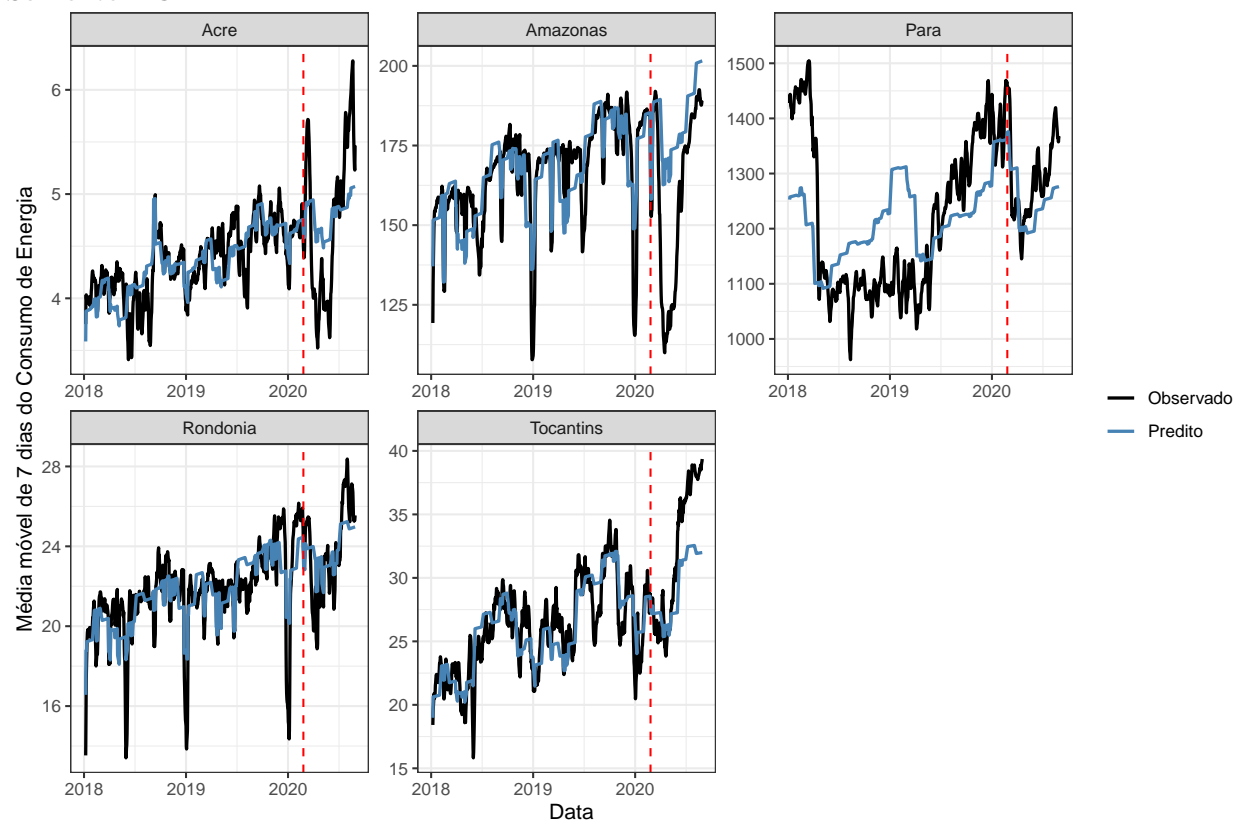
Somente ACL



Região Norte



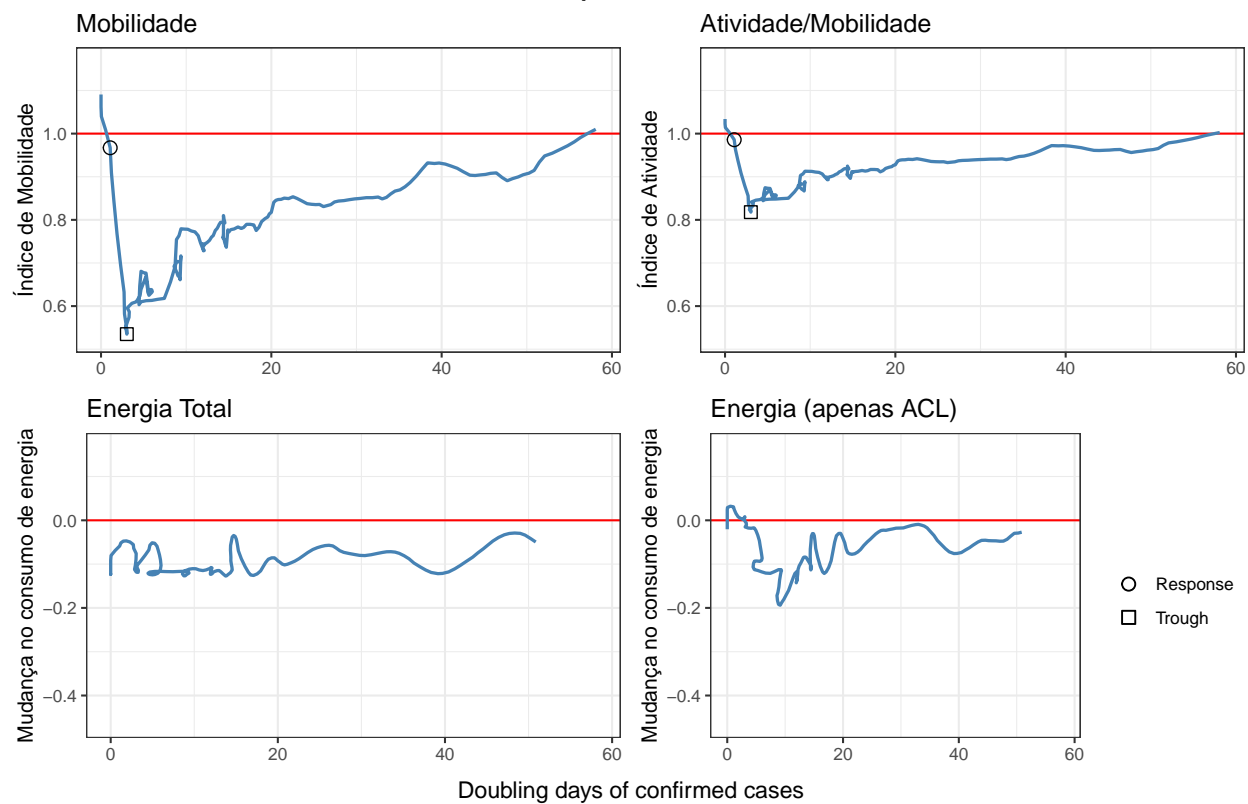
Somente ACL



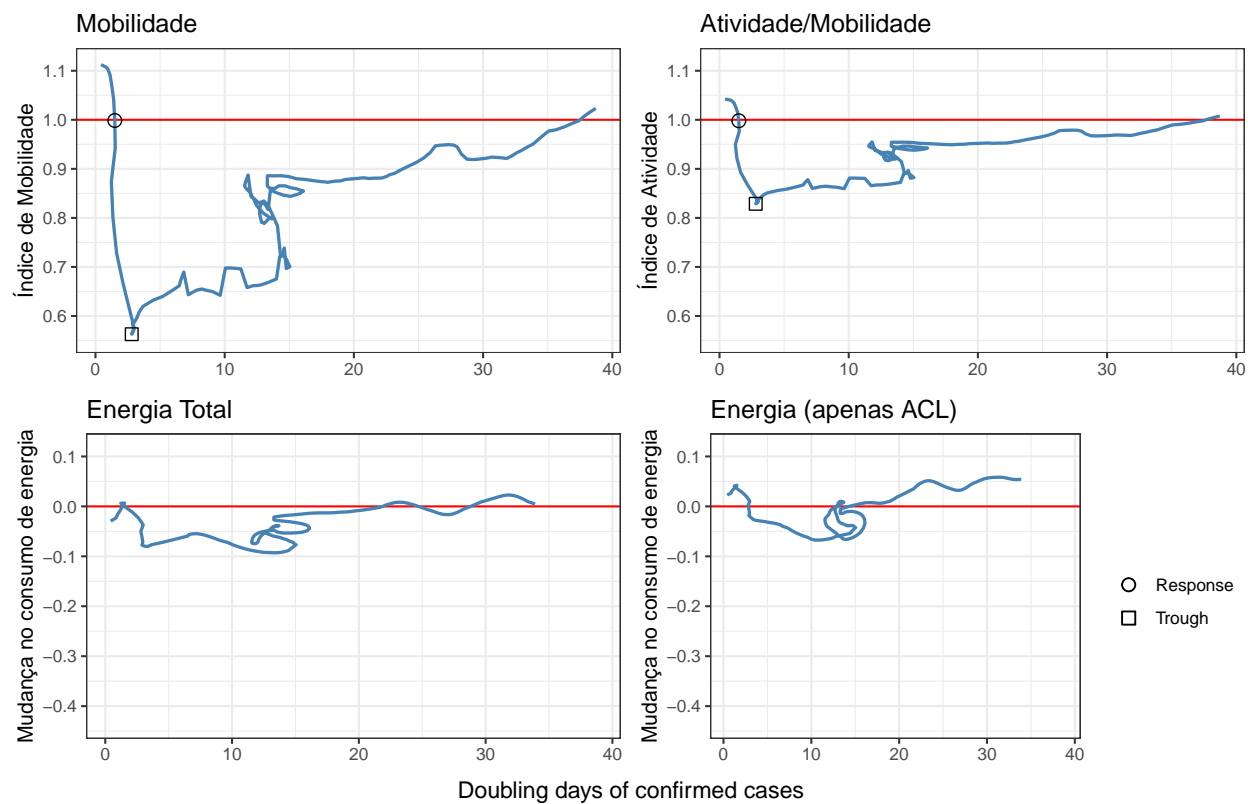
Atividade x COVID

Região Sudeste

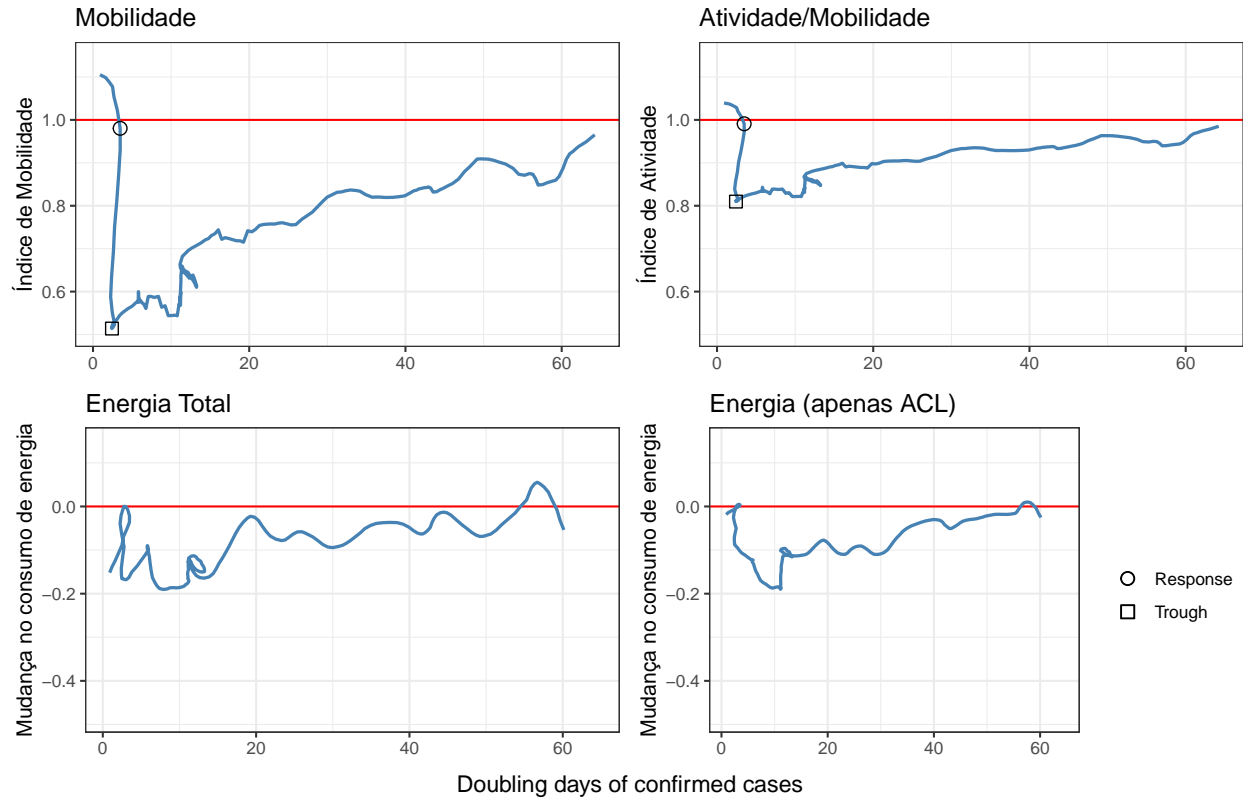
Espírito Santo



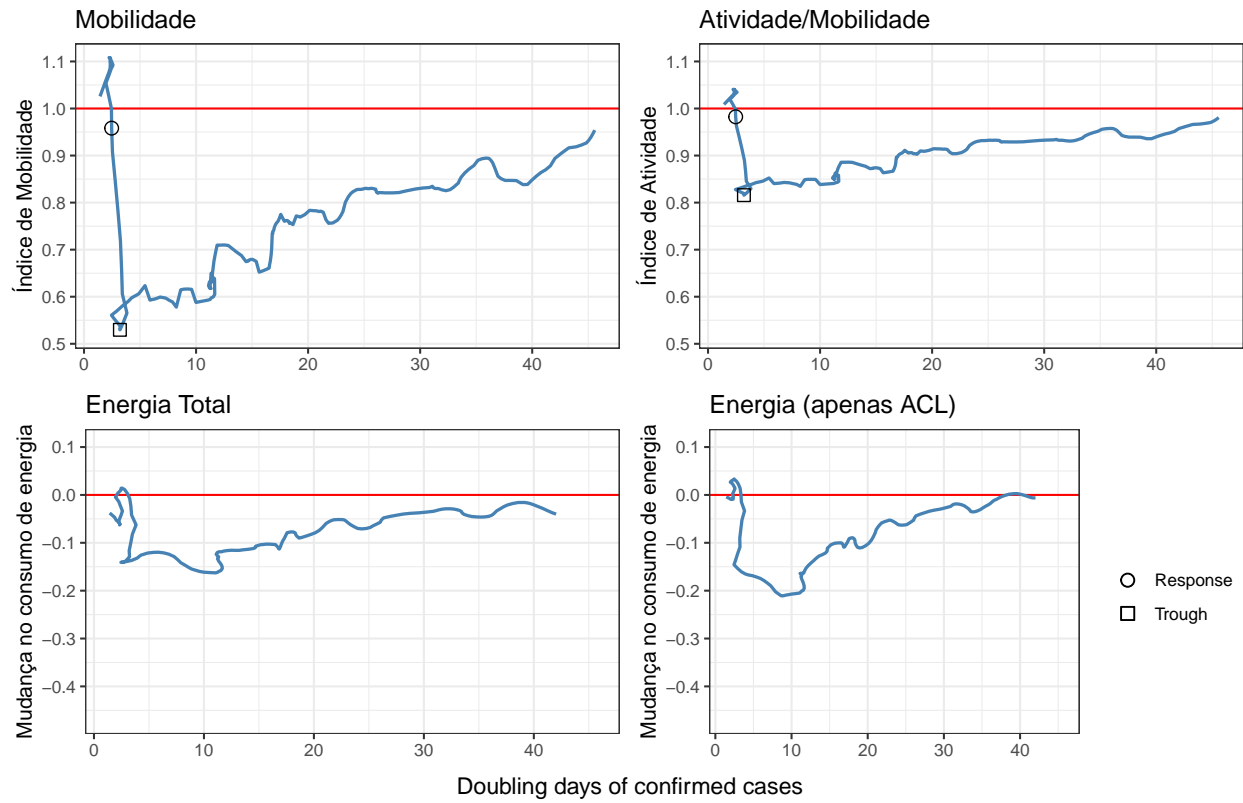
Minas Gerais



Rio de Janeiro

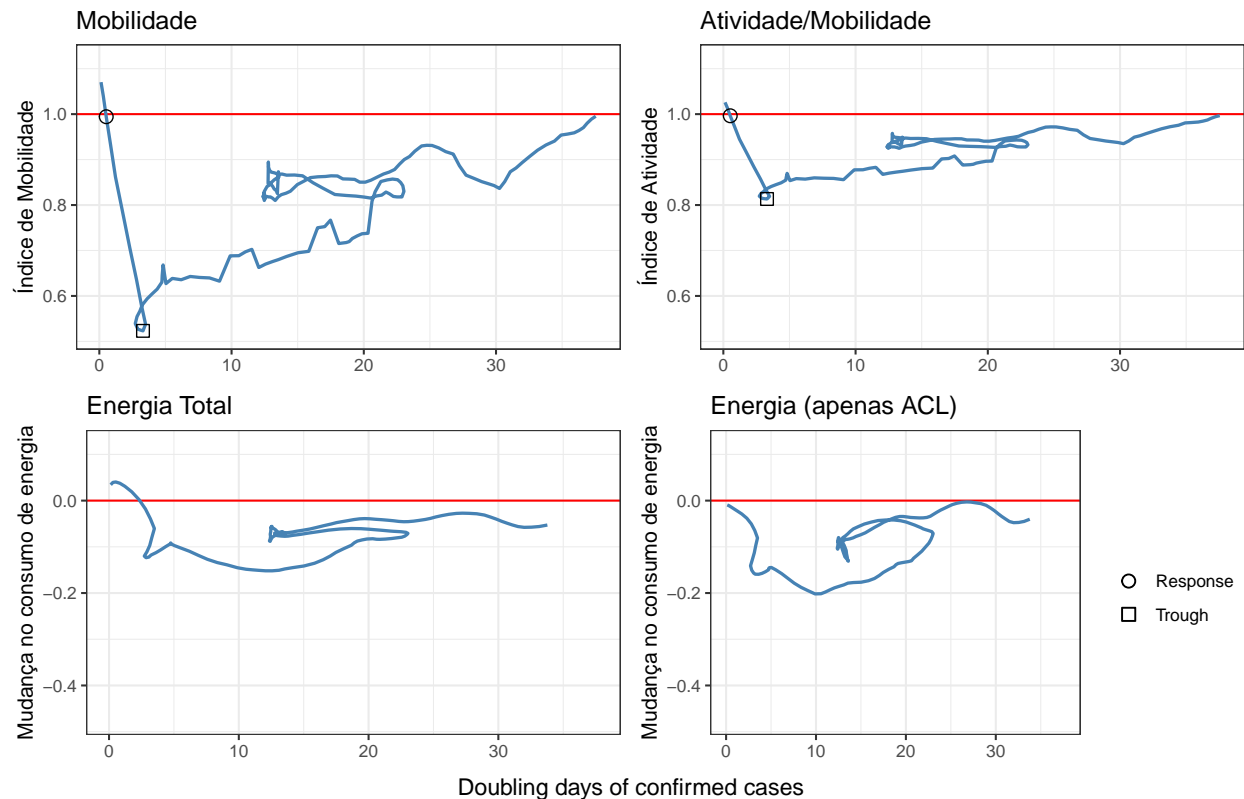


Sao Paulo

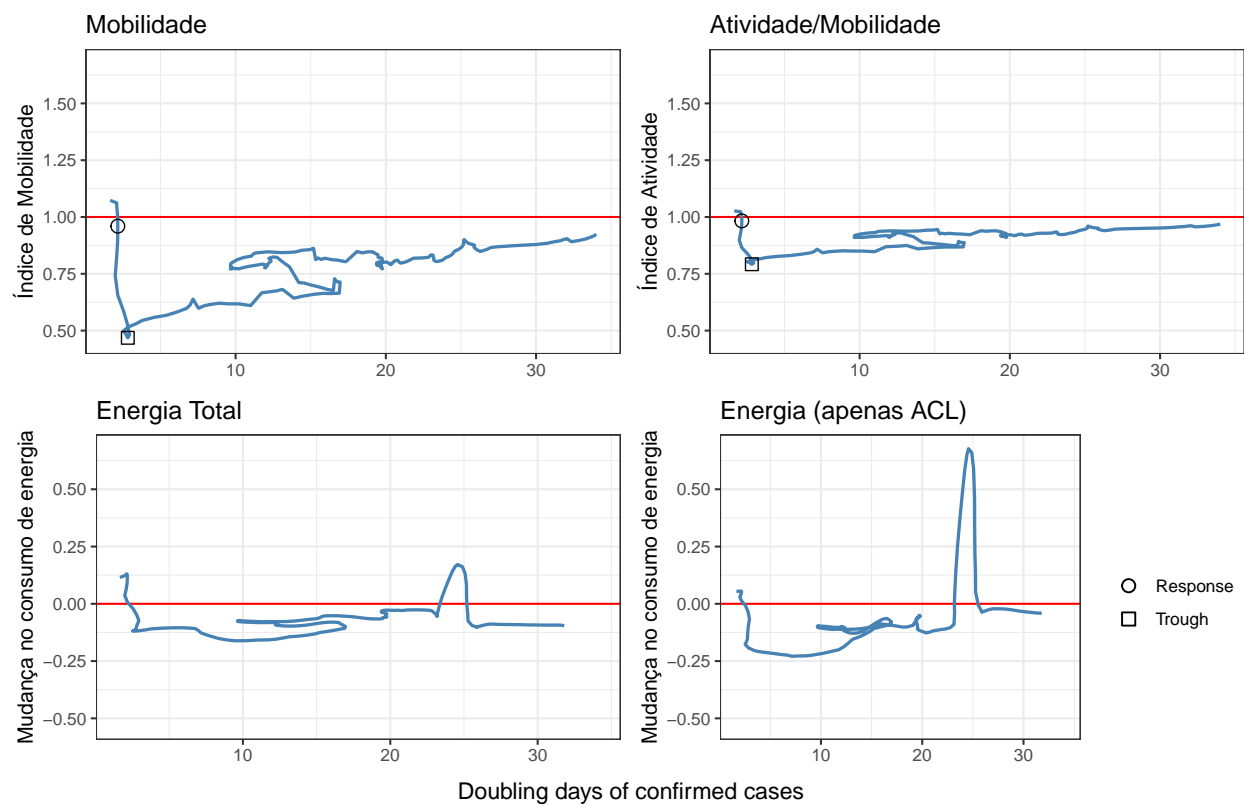


Região Sul

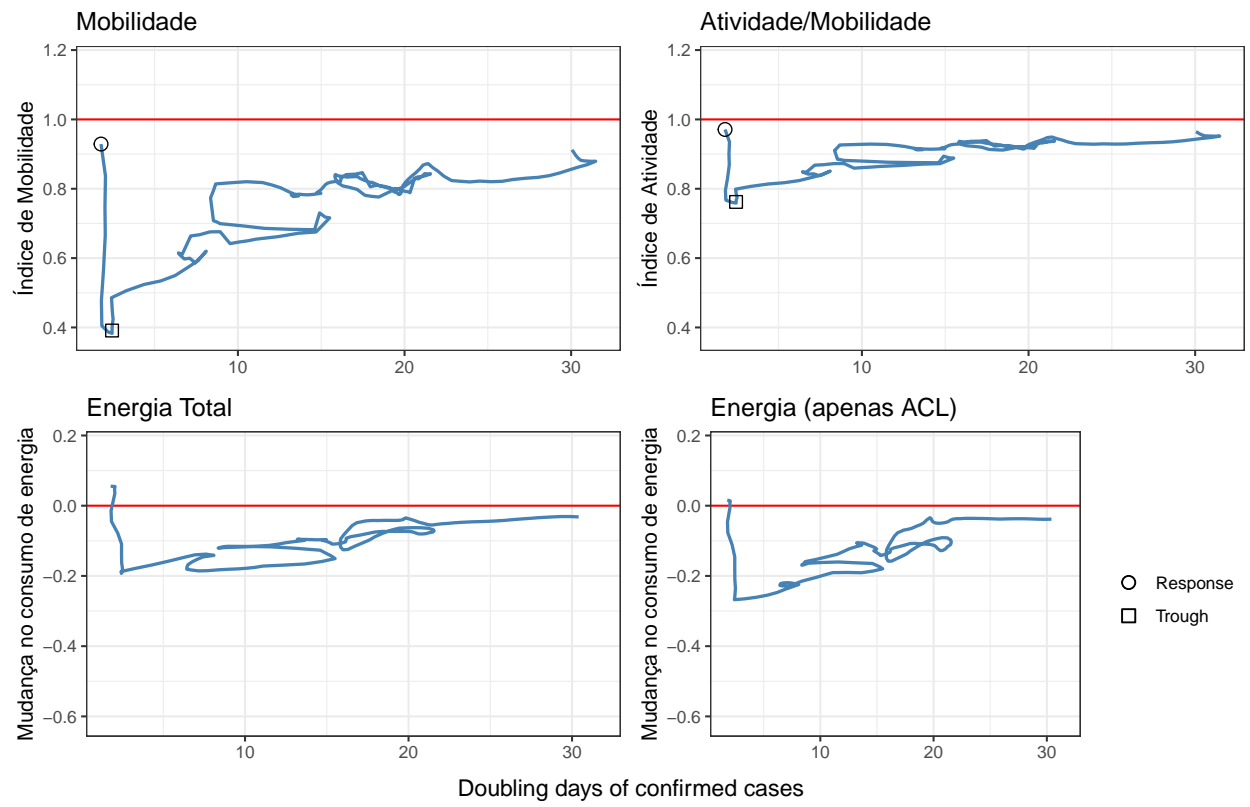
Parana



Rio Grande do Sul

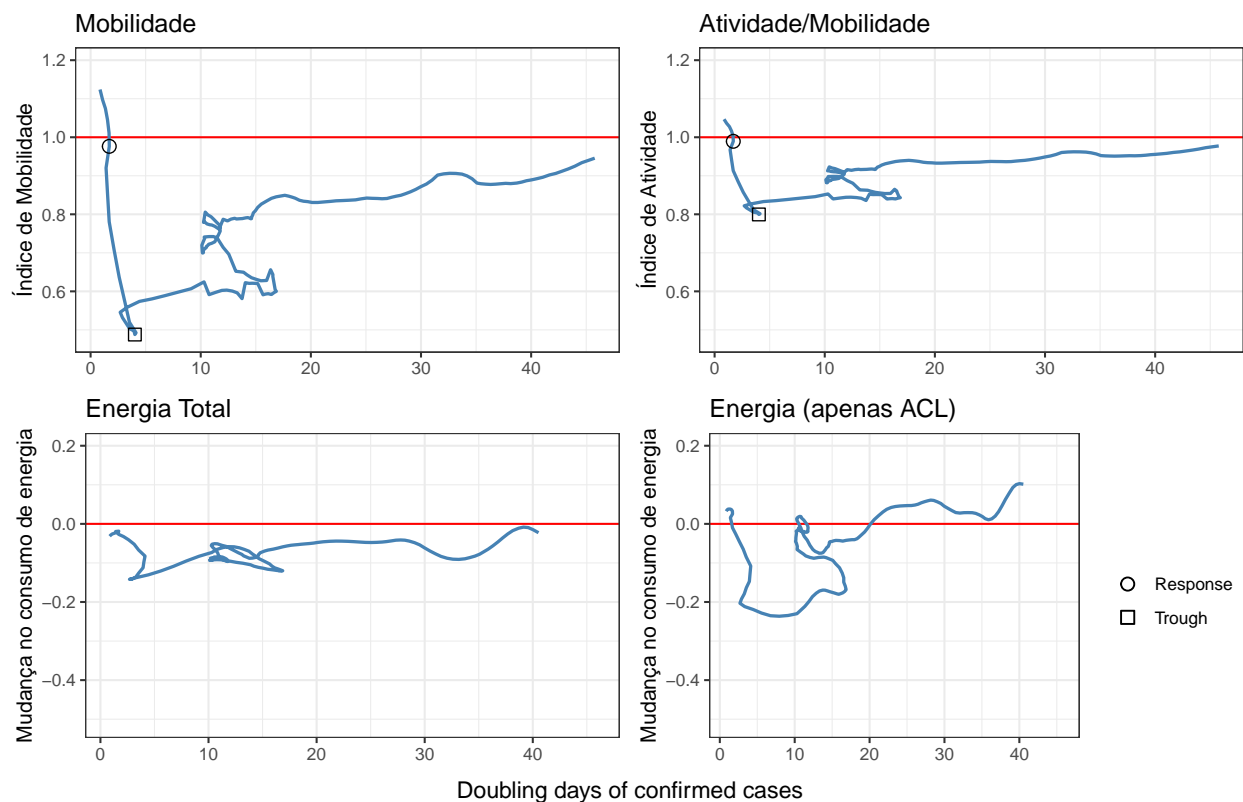


Santa Catarina

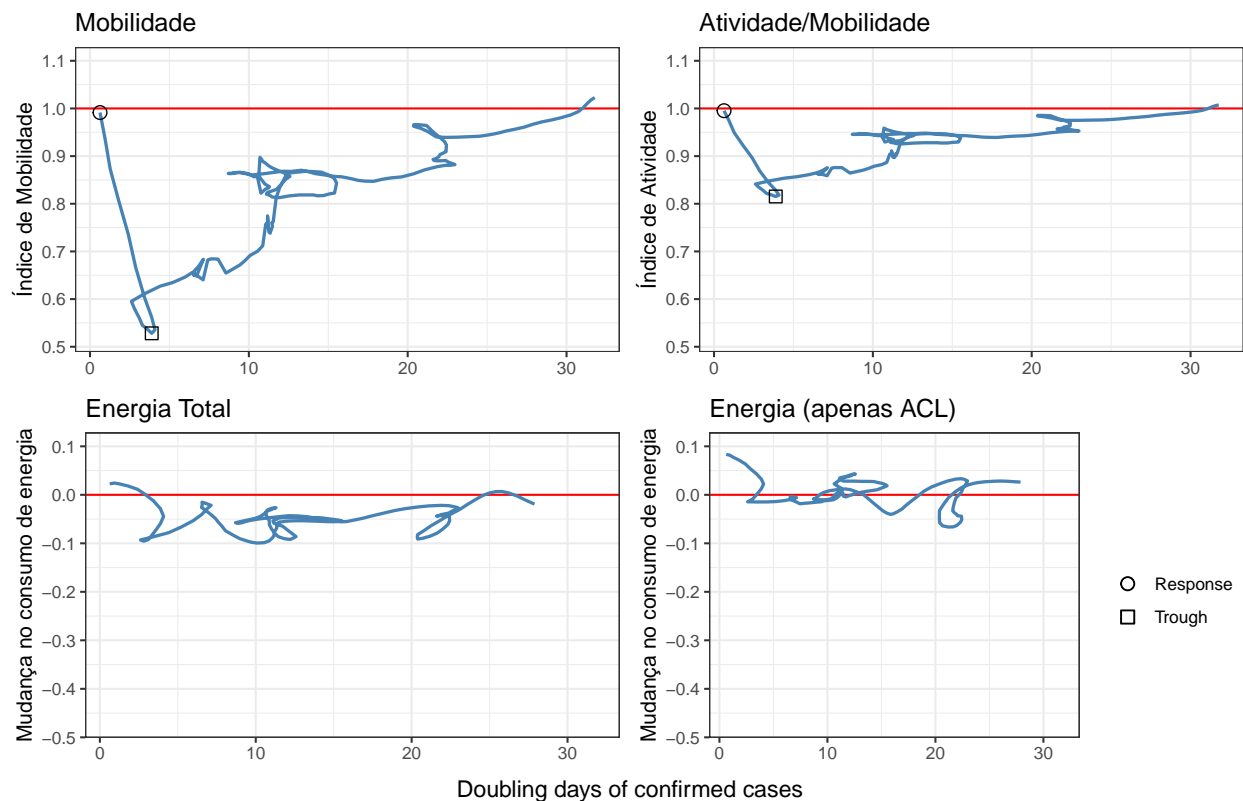


Região Centro-Oeste

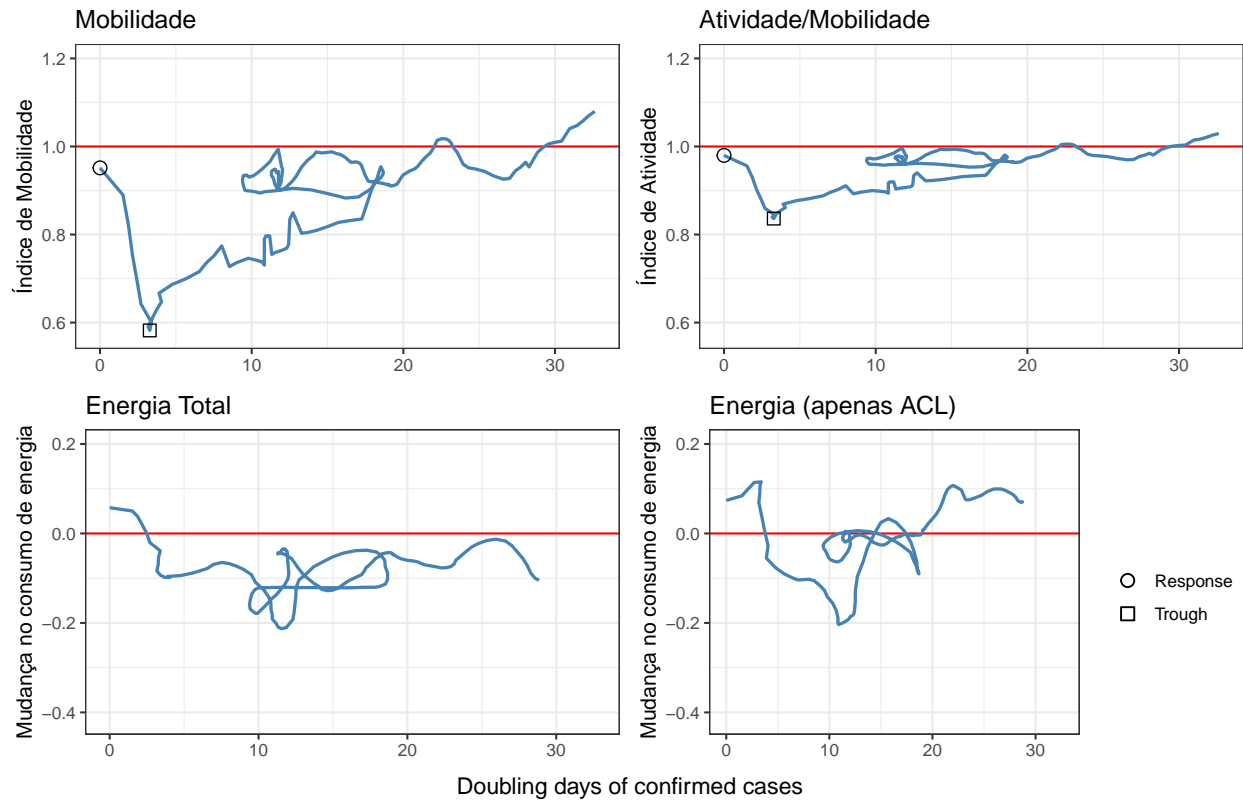
Distrito Federal



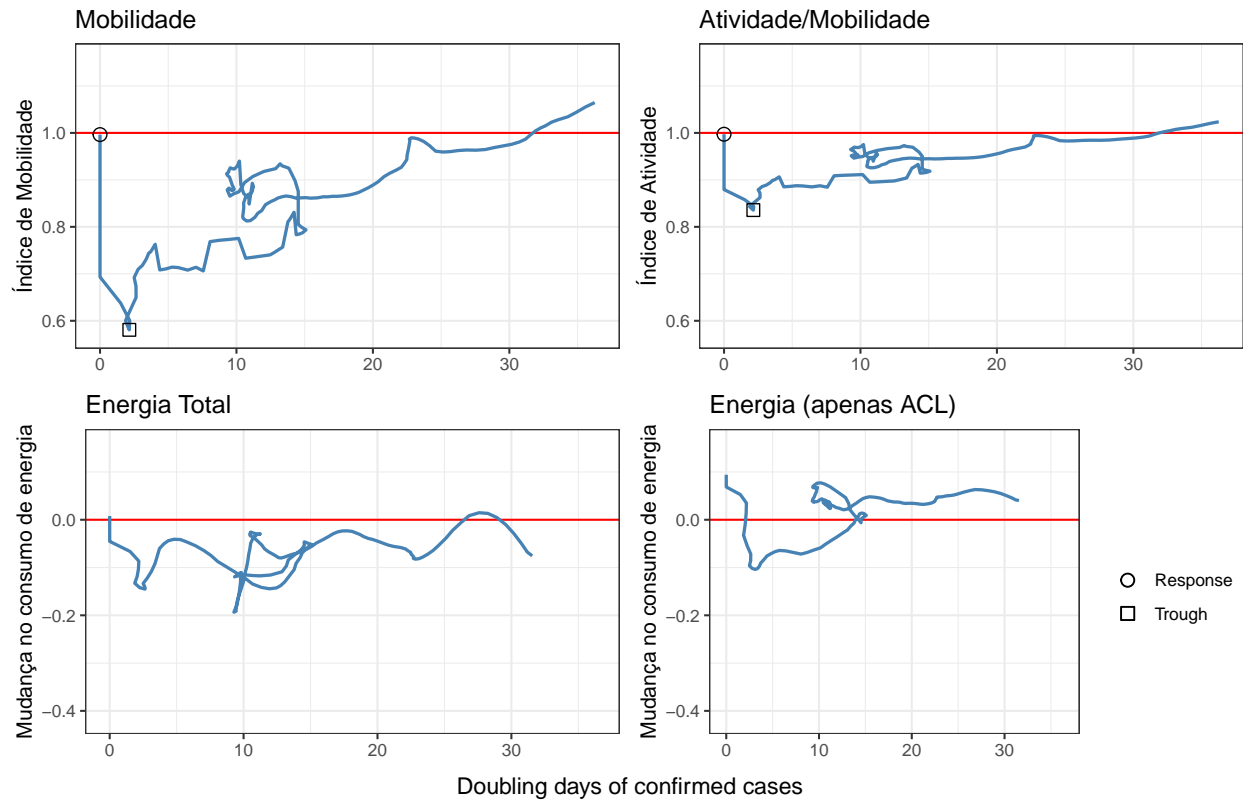
Goias



Mato Grosso do Sul

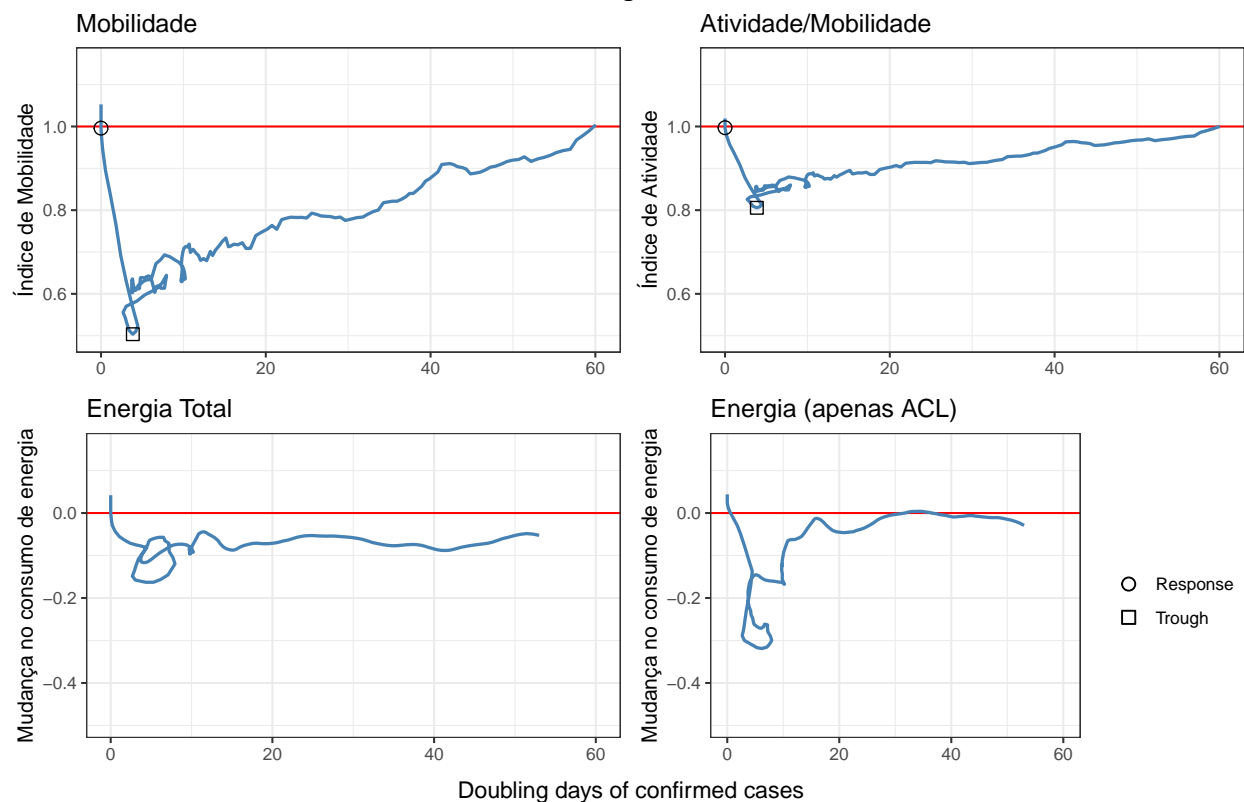


Mato Grosso



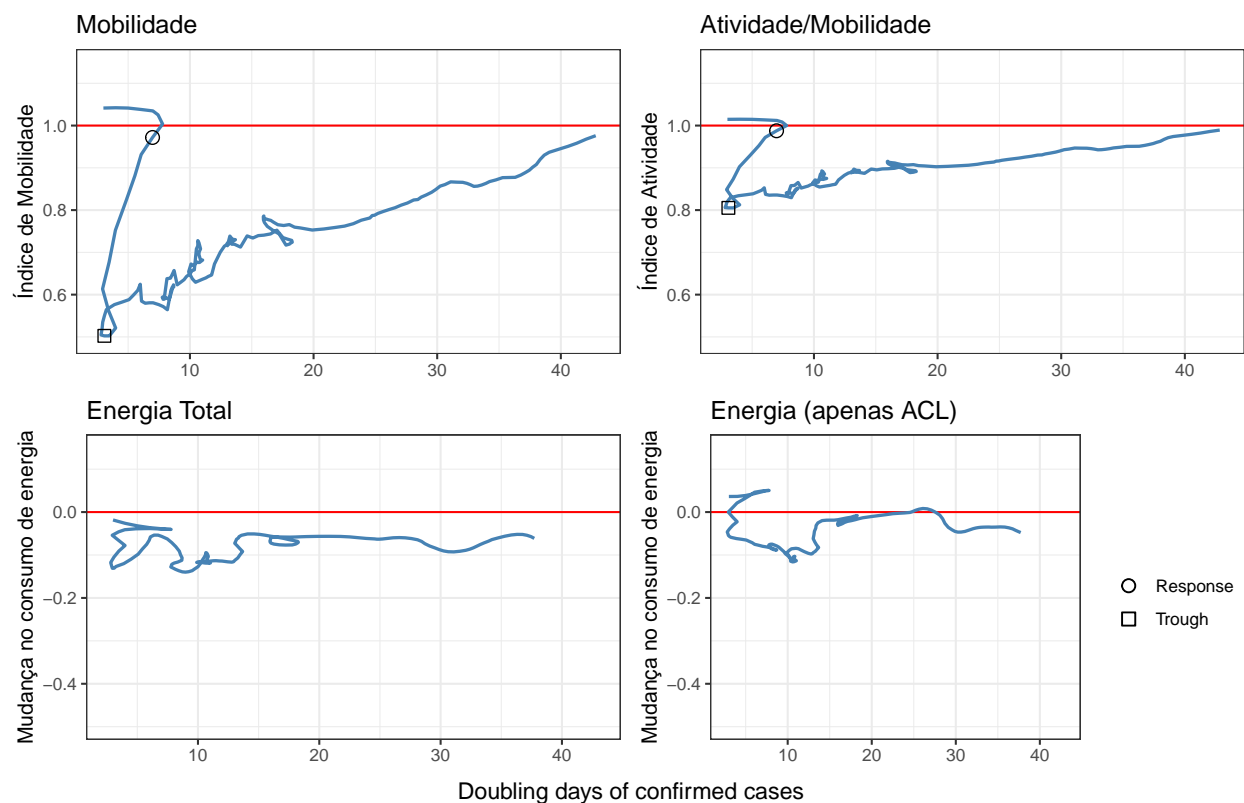
Região Nordeste

Alagoas



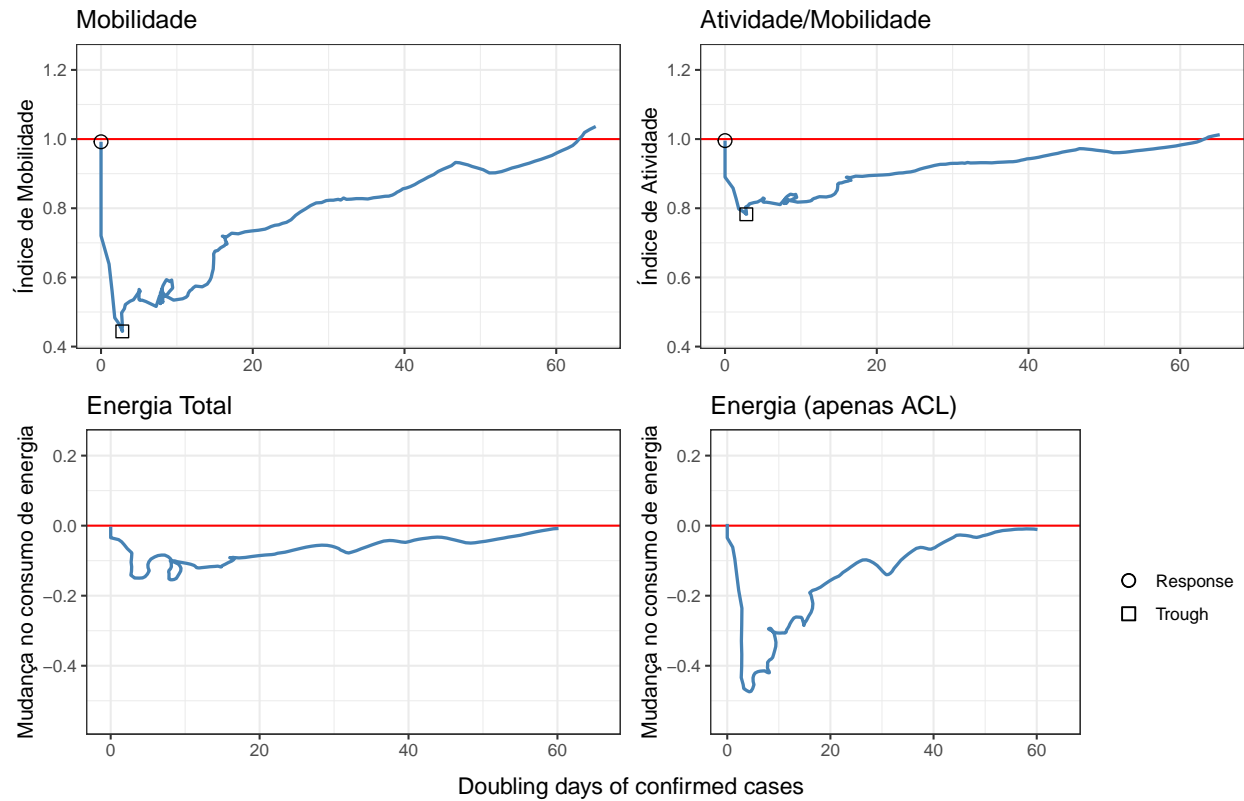
Doubling days of confirmed cases

Bahia

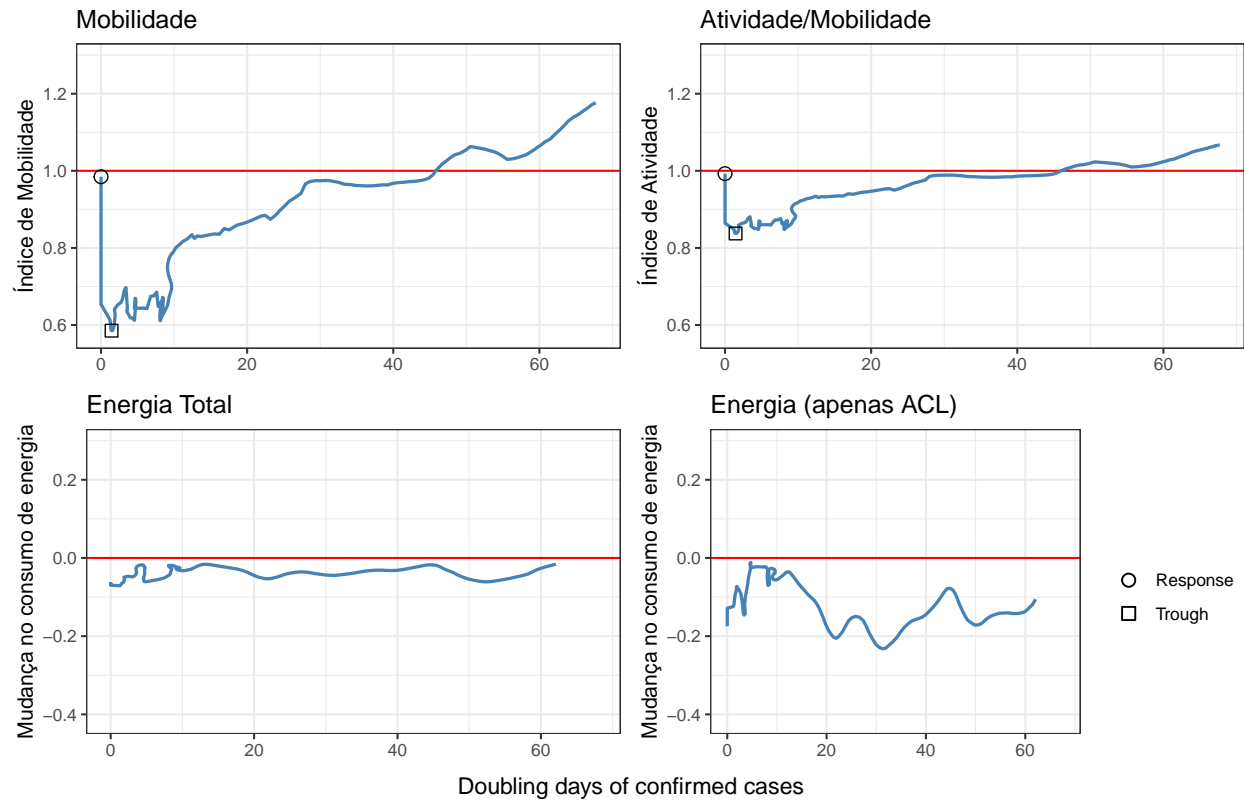


Doubling days of confirmed cases

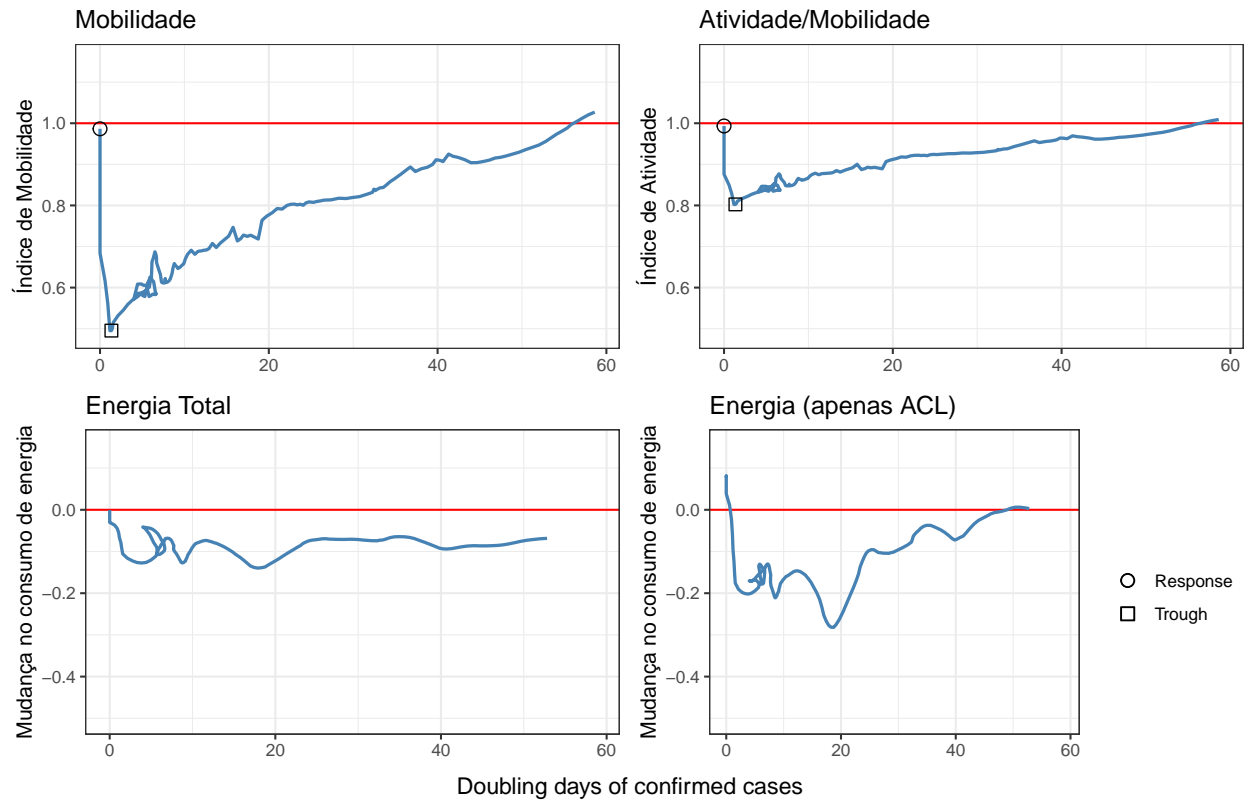
Ceara



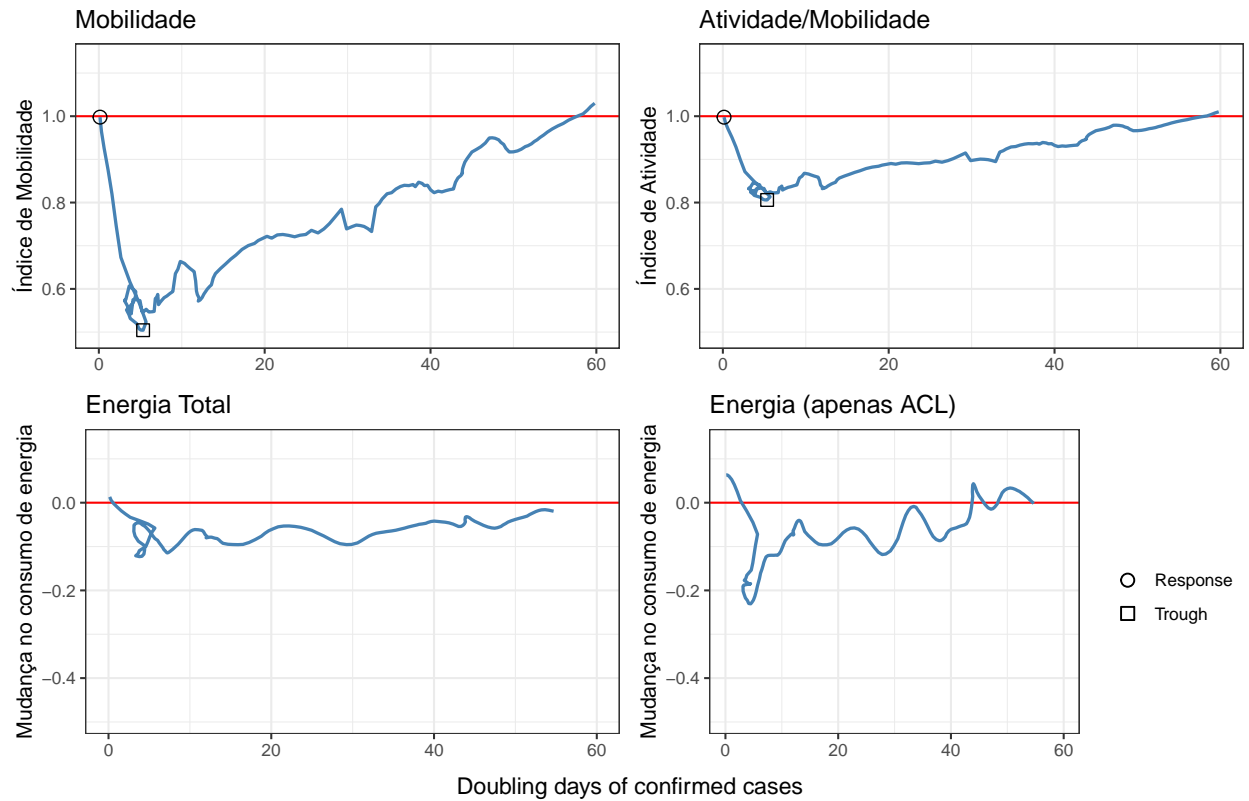
Maranhao



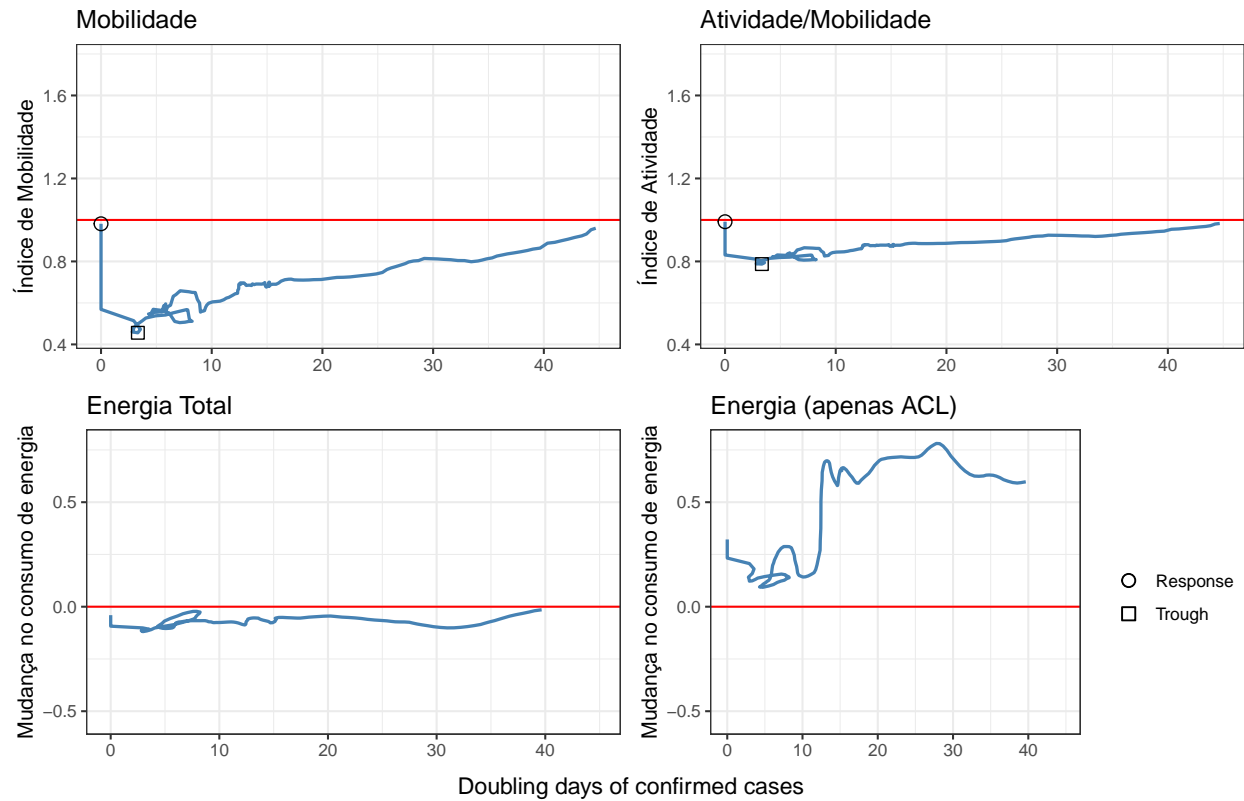
Paraíba



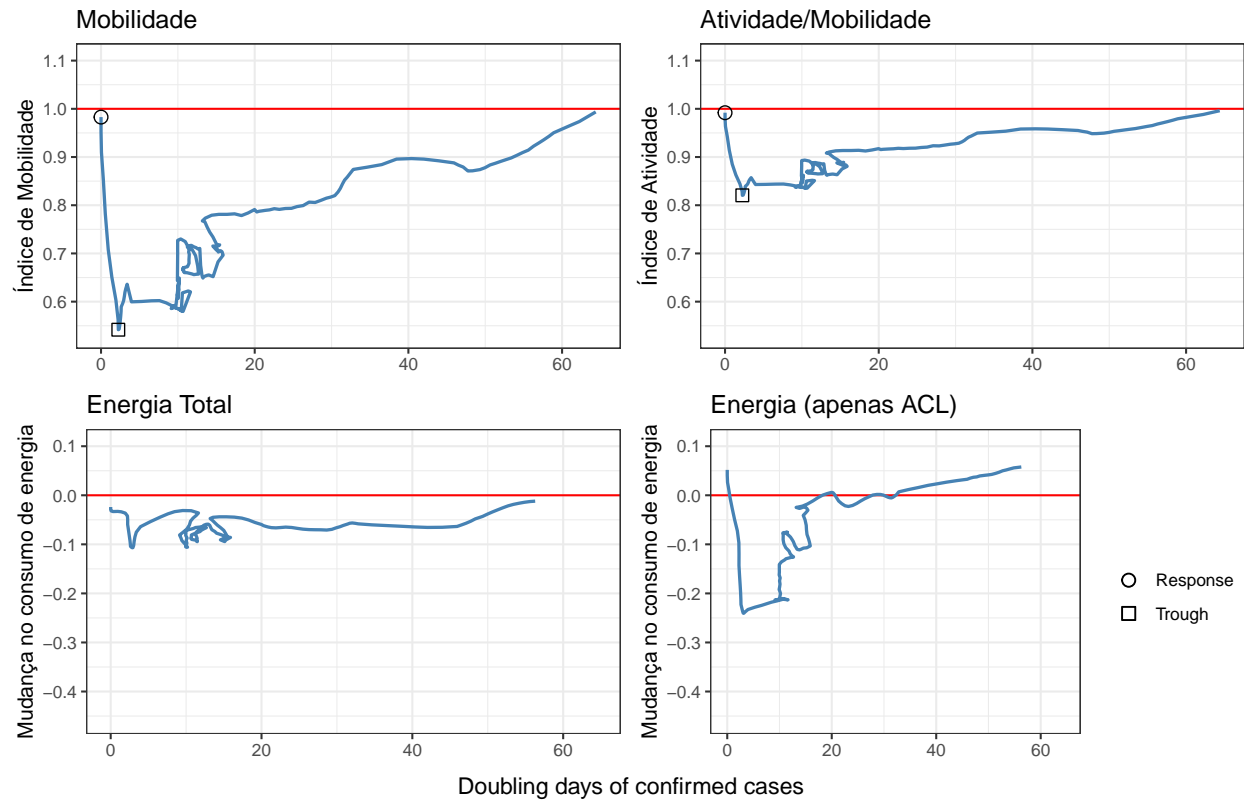
Pernambuco



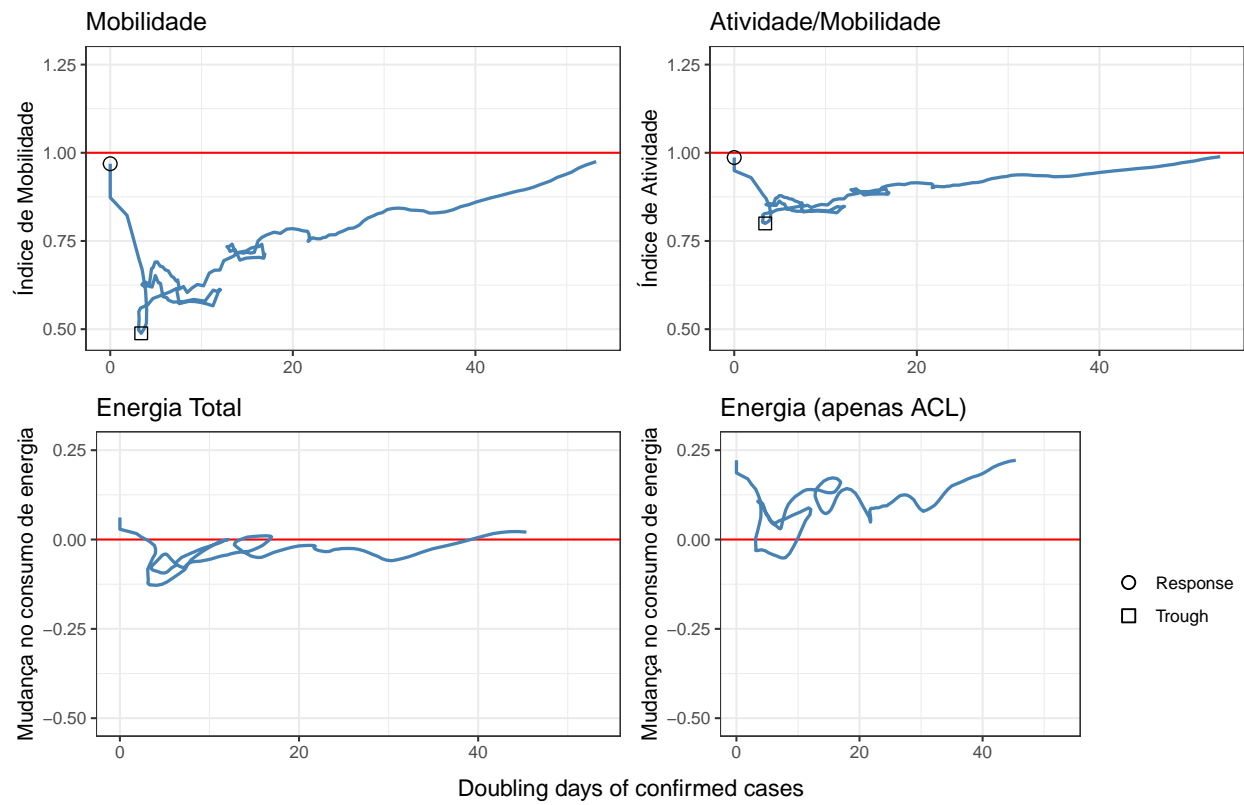
Piauí



Rio Grande do Norte

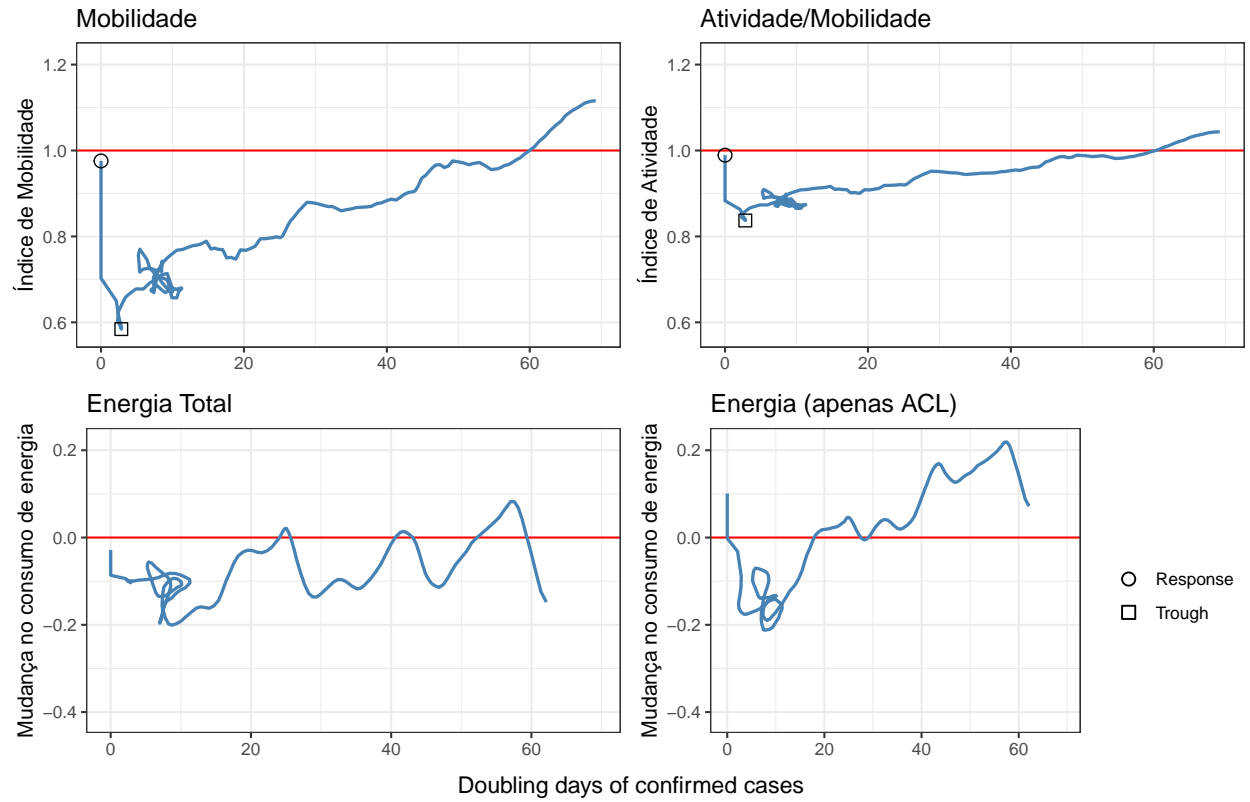


Sergipe

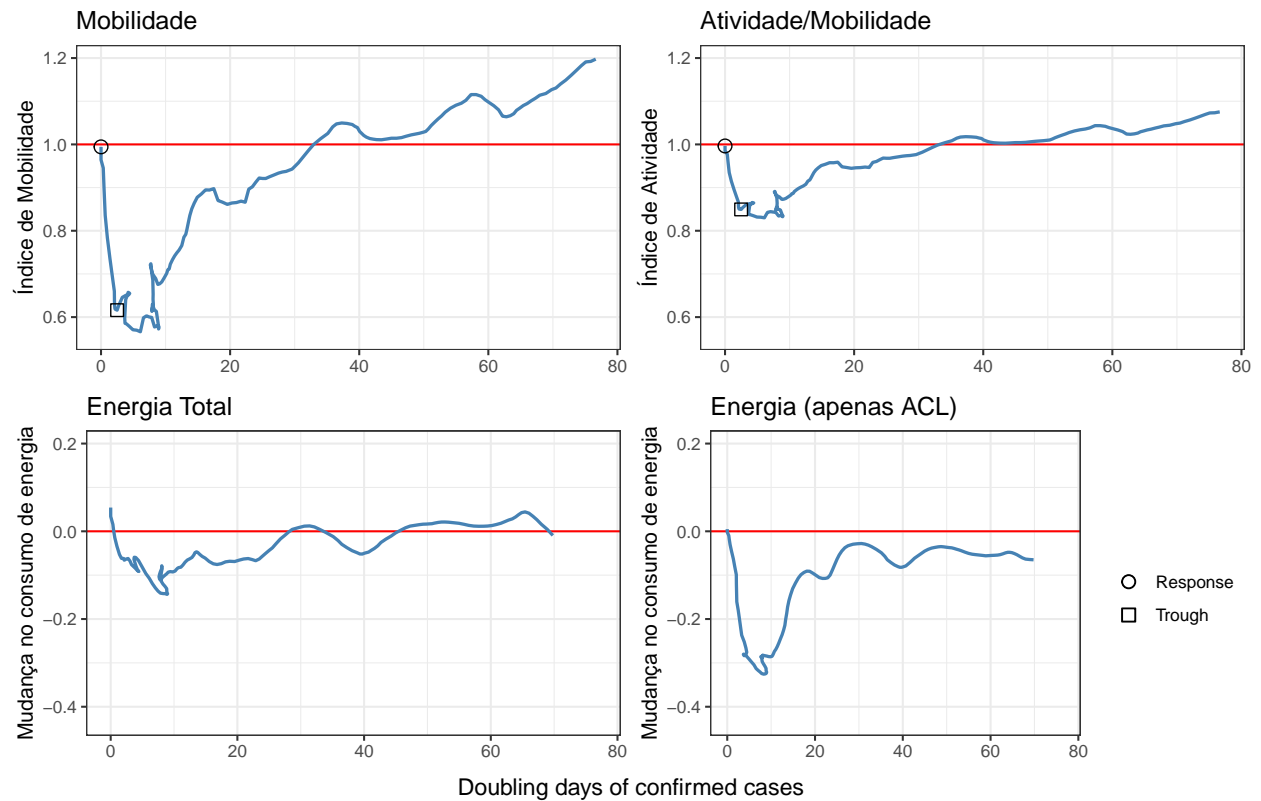


Região Norte

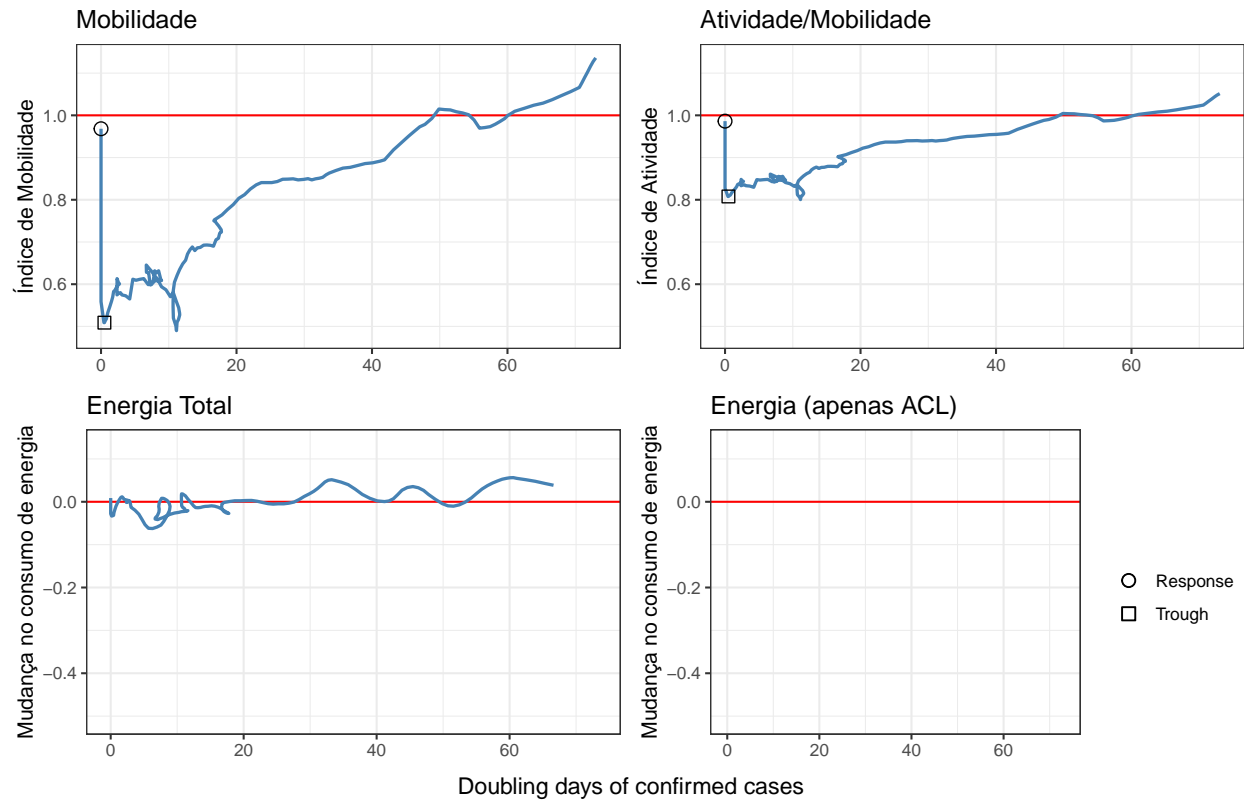
Acre



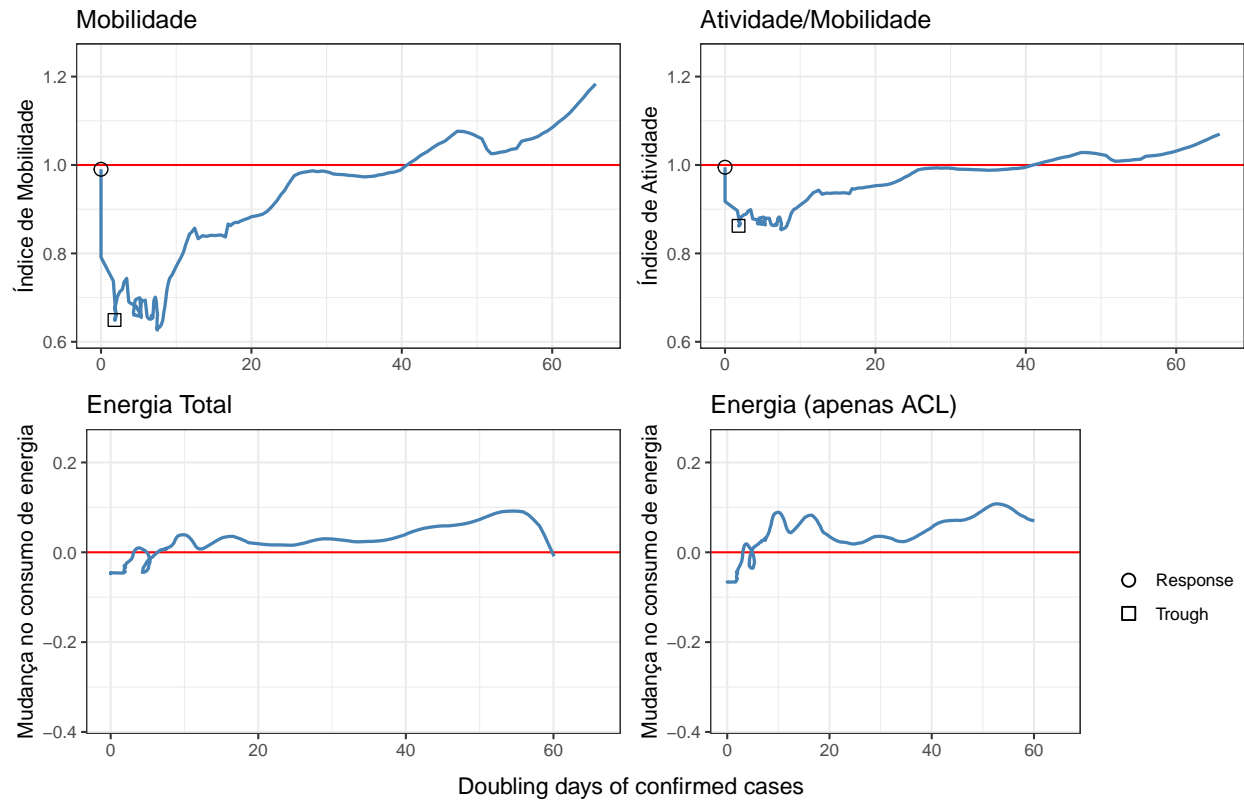
Amazonas



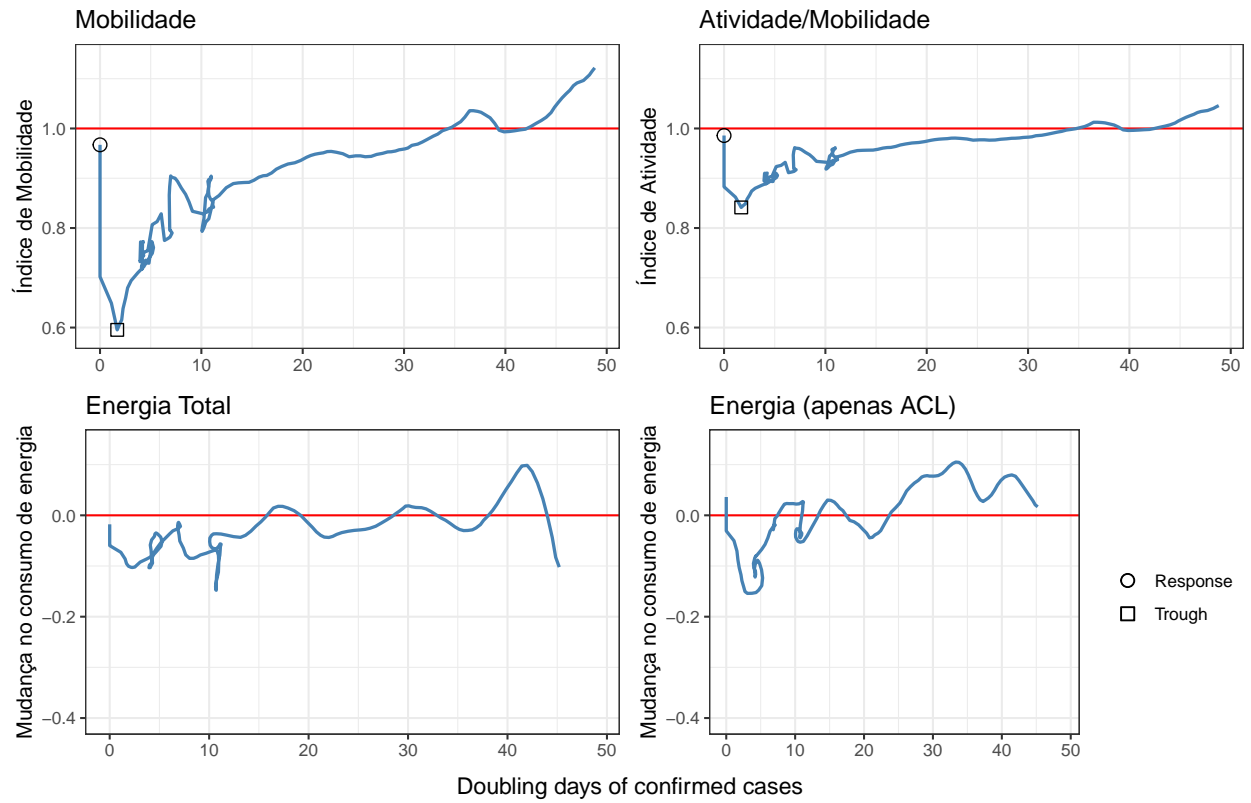
Amapa



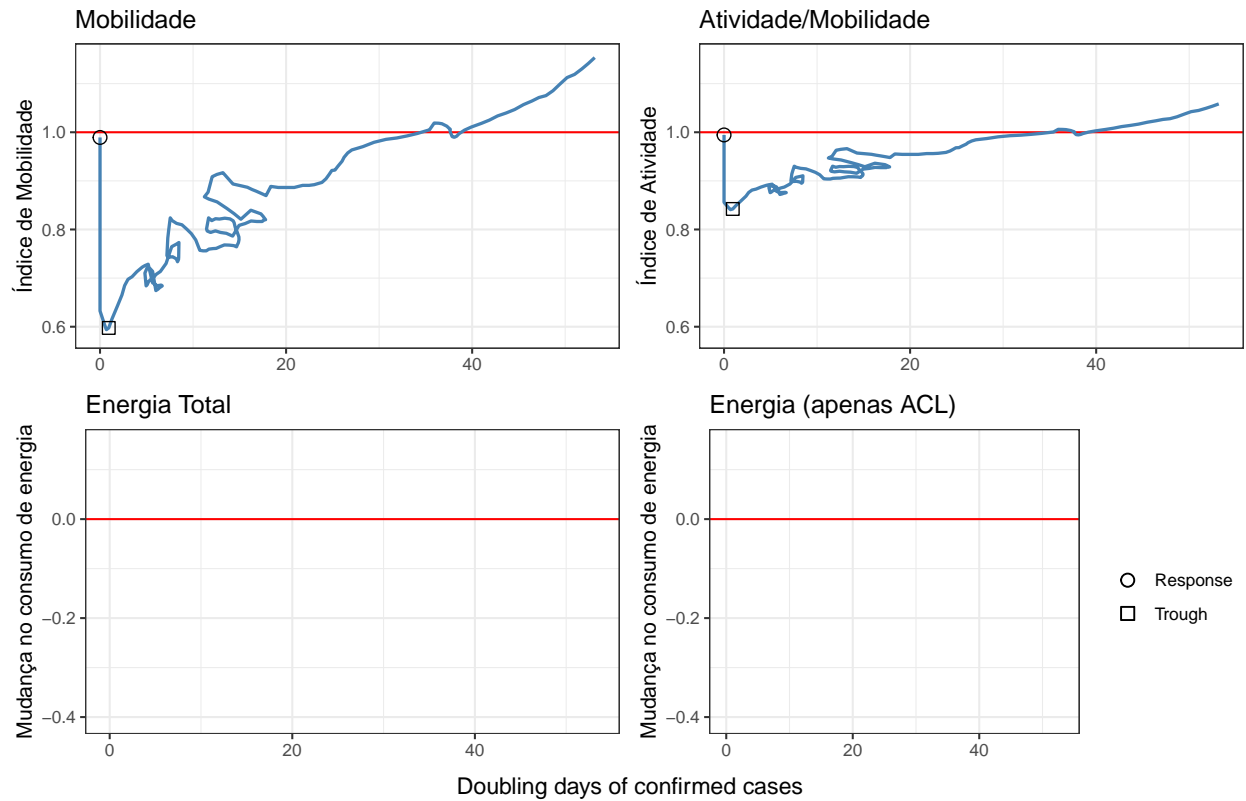
Para



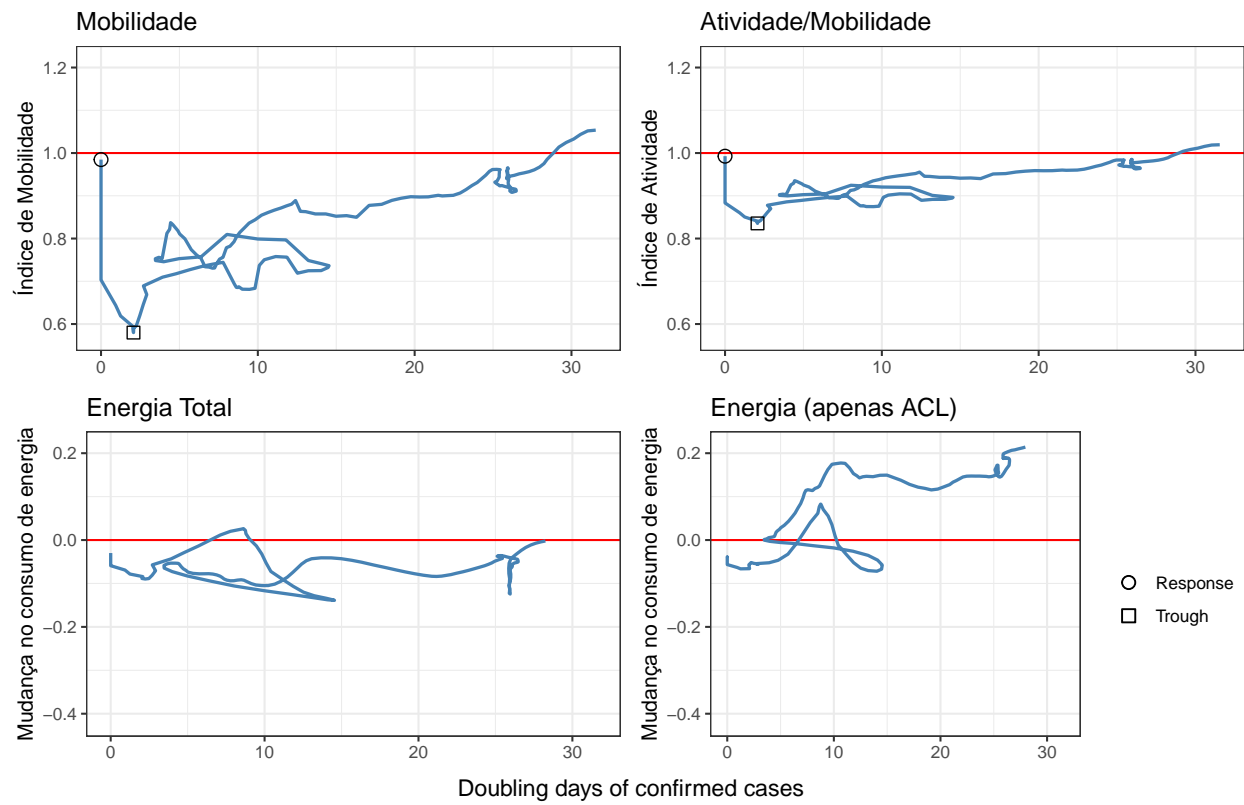
Rondonia



Roraima

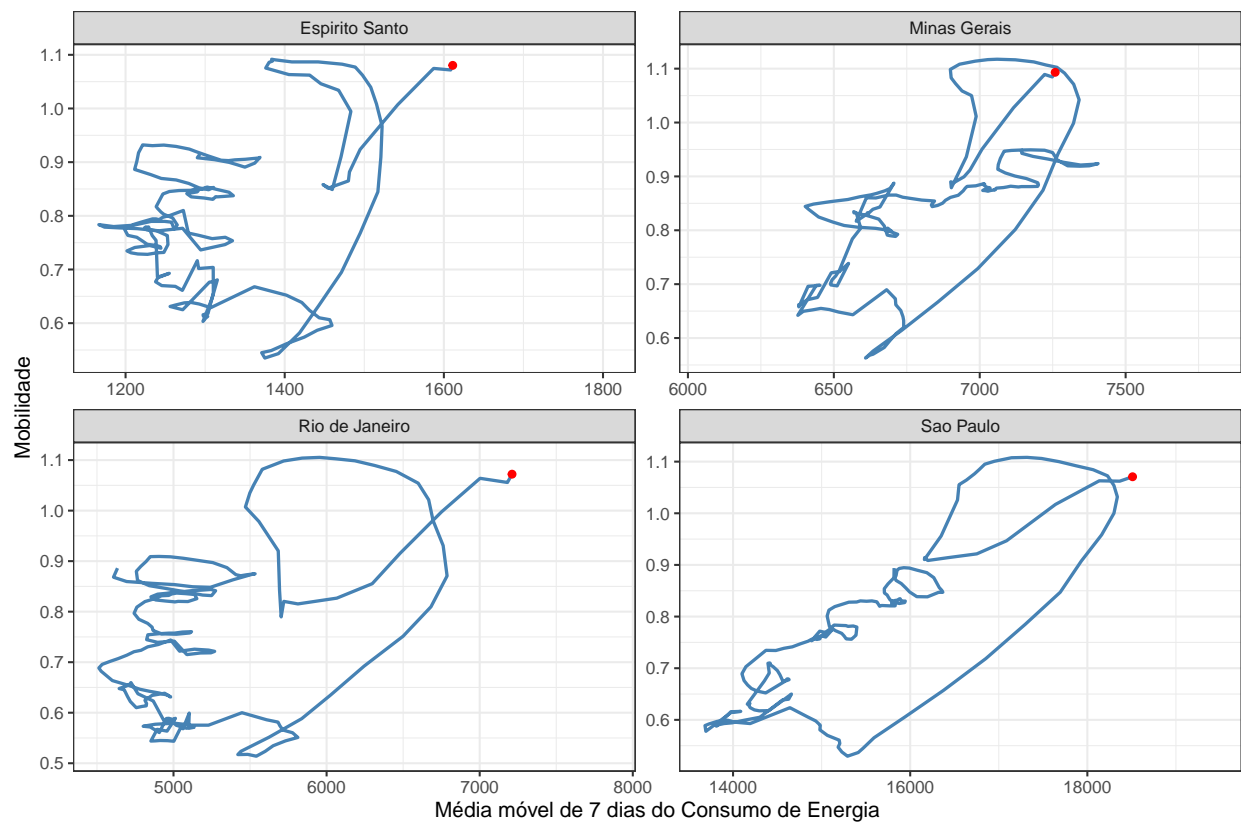


Tocantins

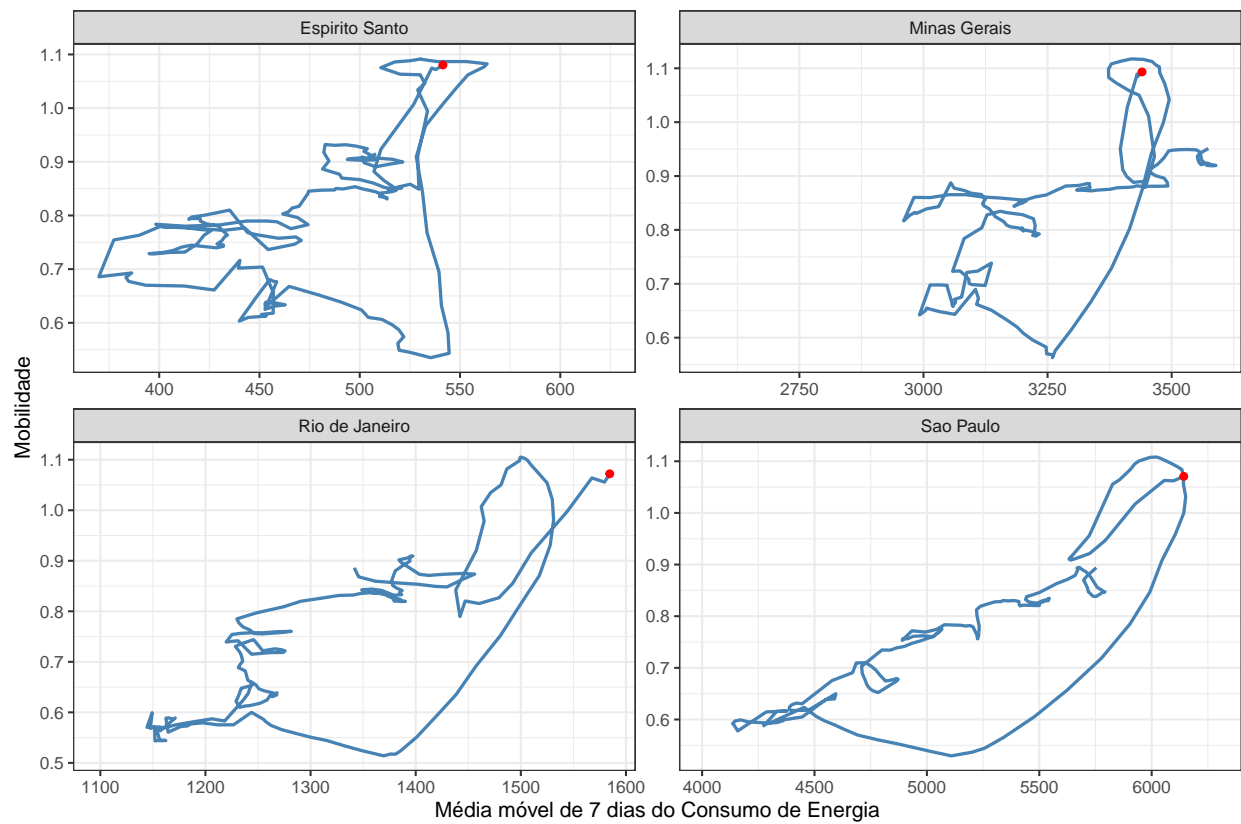


Relação Mobilidade x Consumo de Energia

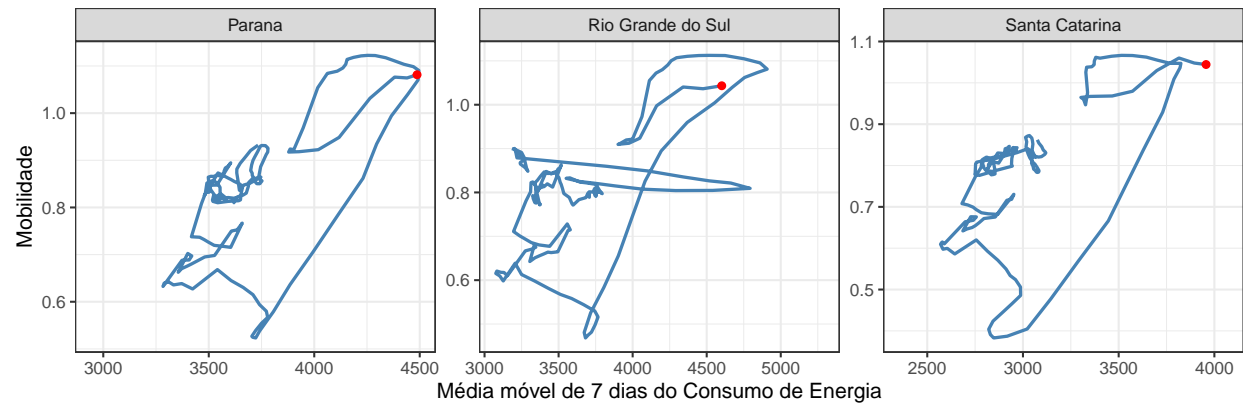
Região Sudeste



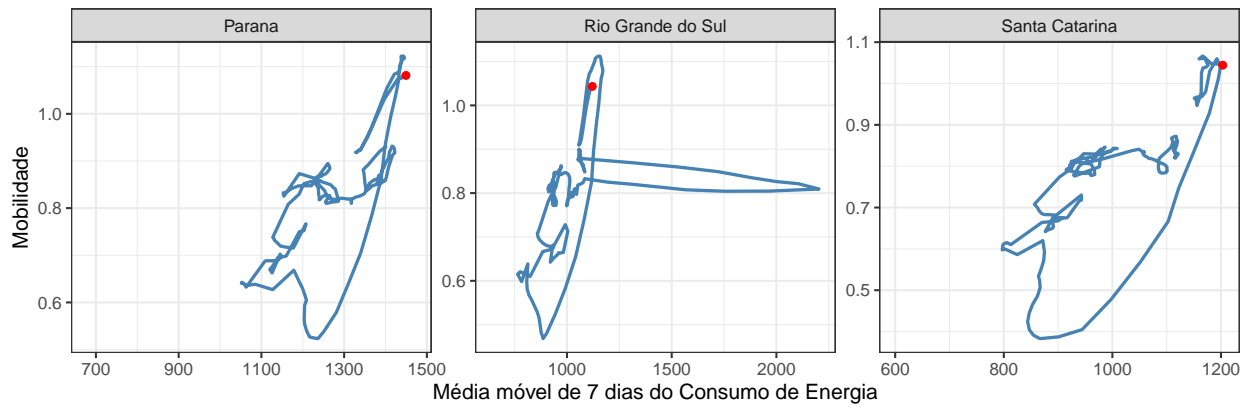
Somente ACL



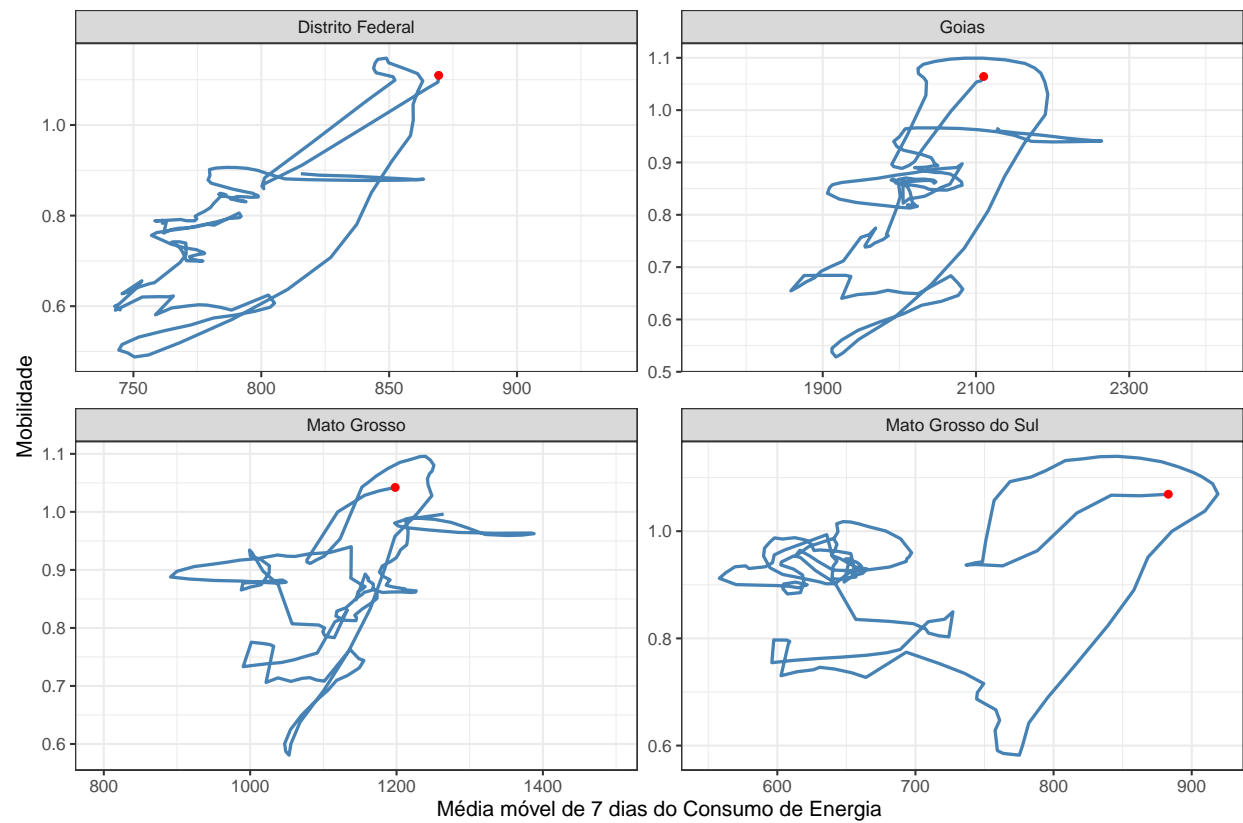
Região Sul



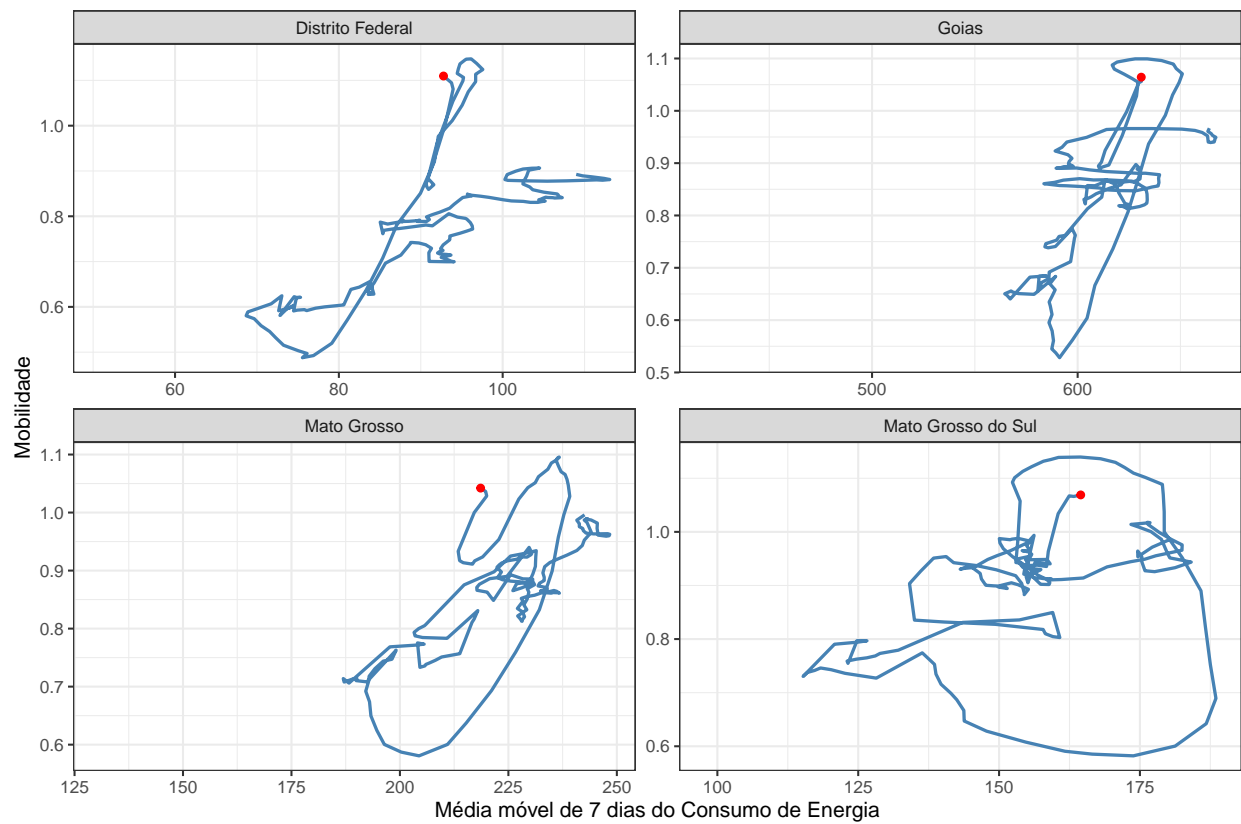
Somente ACL



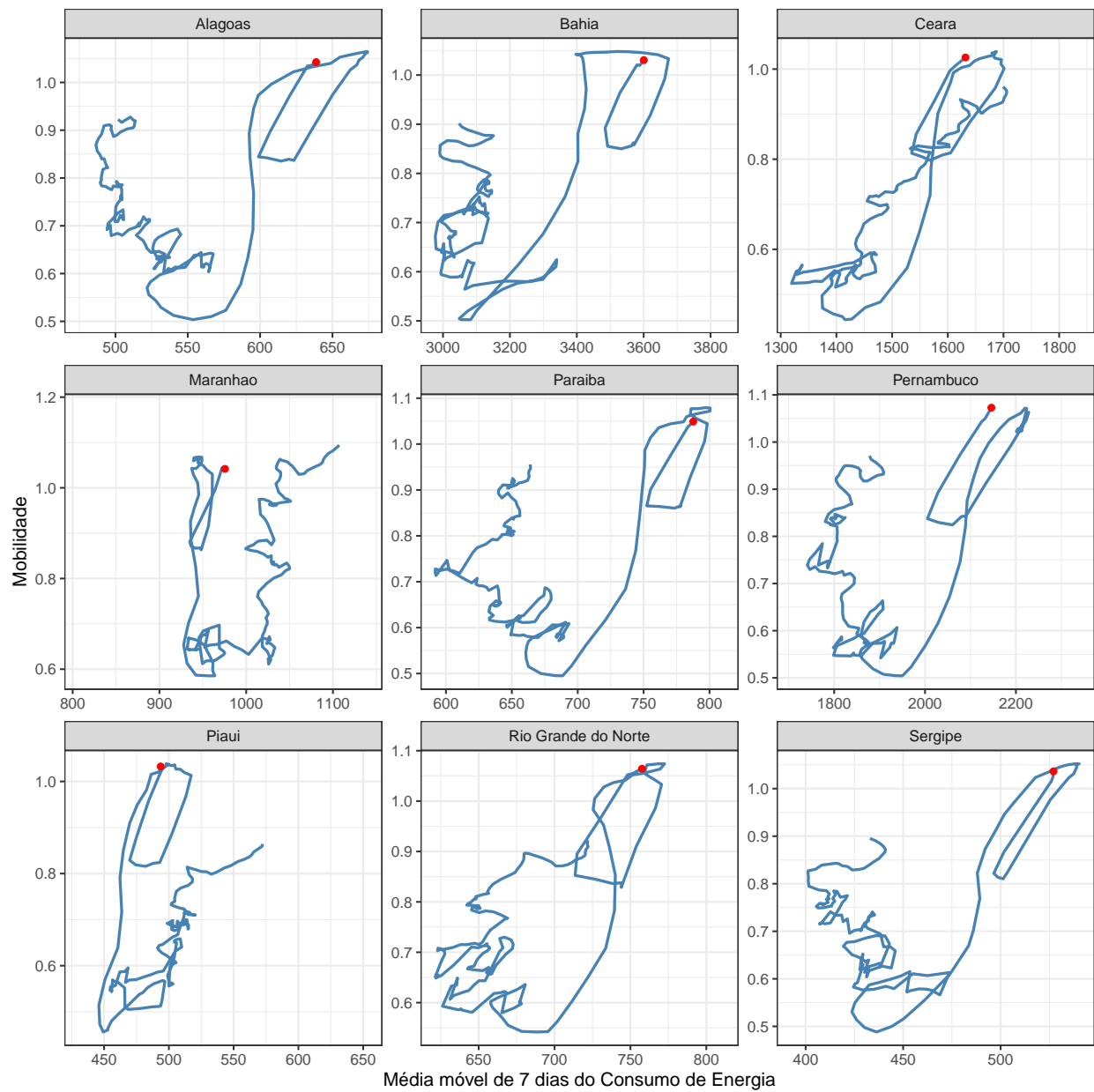
Região Centro-Oeste



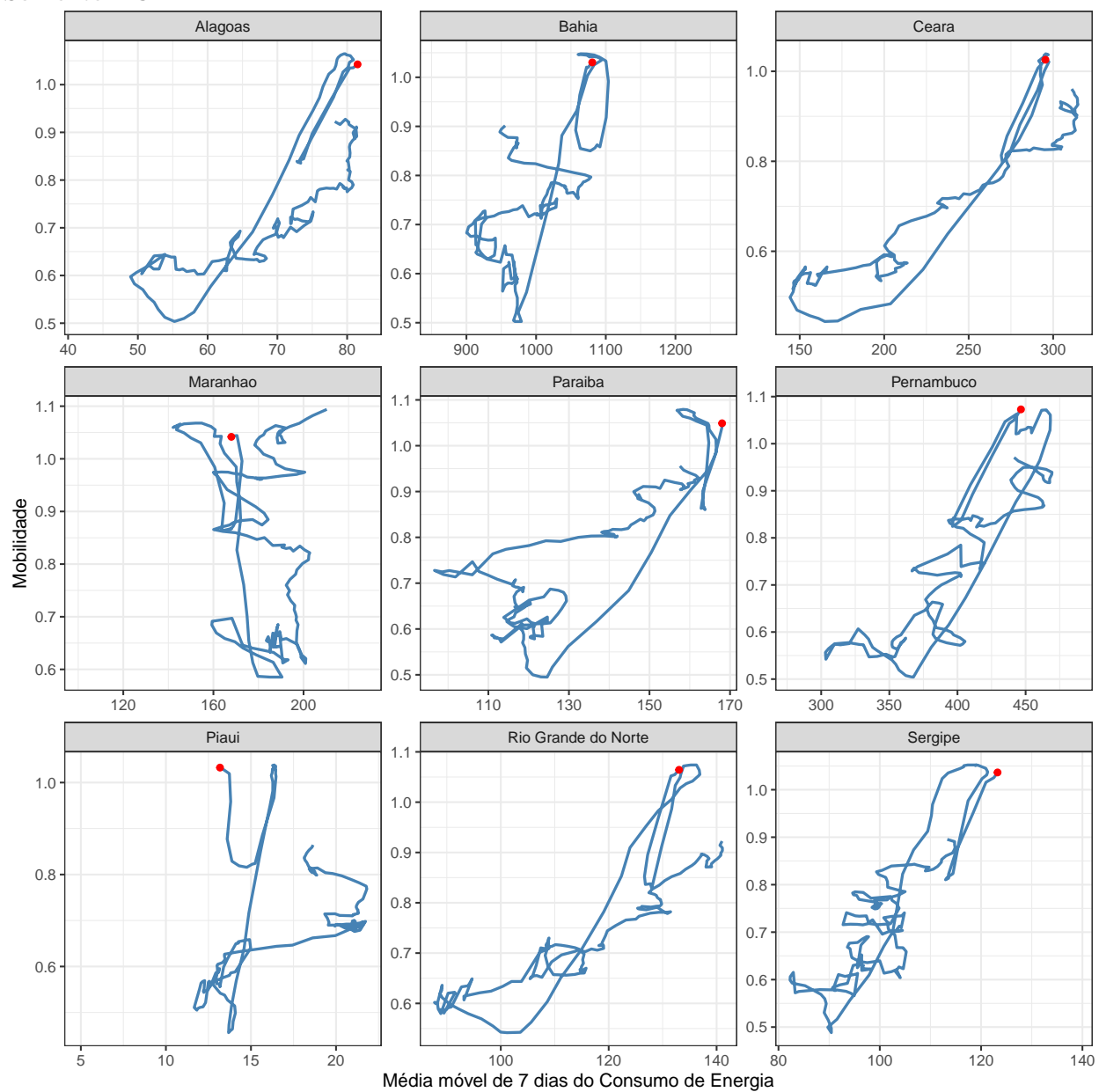
Somente ACL



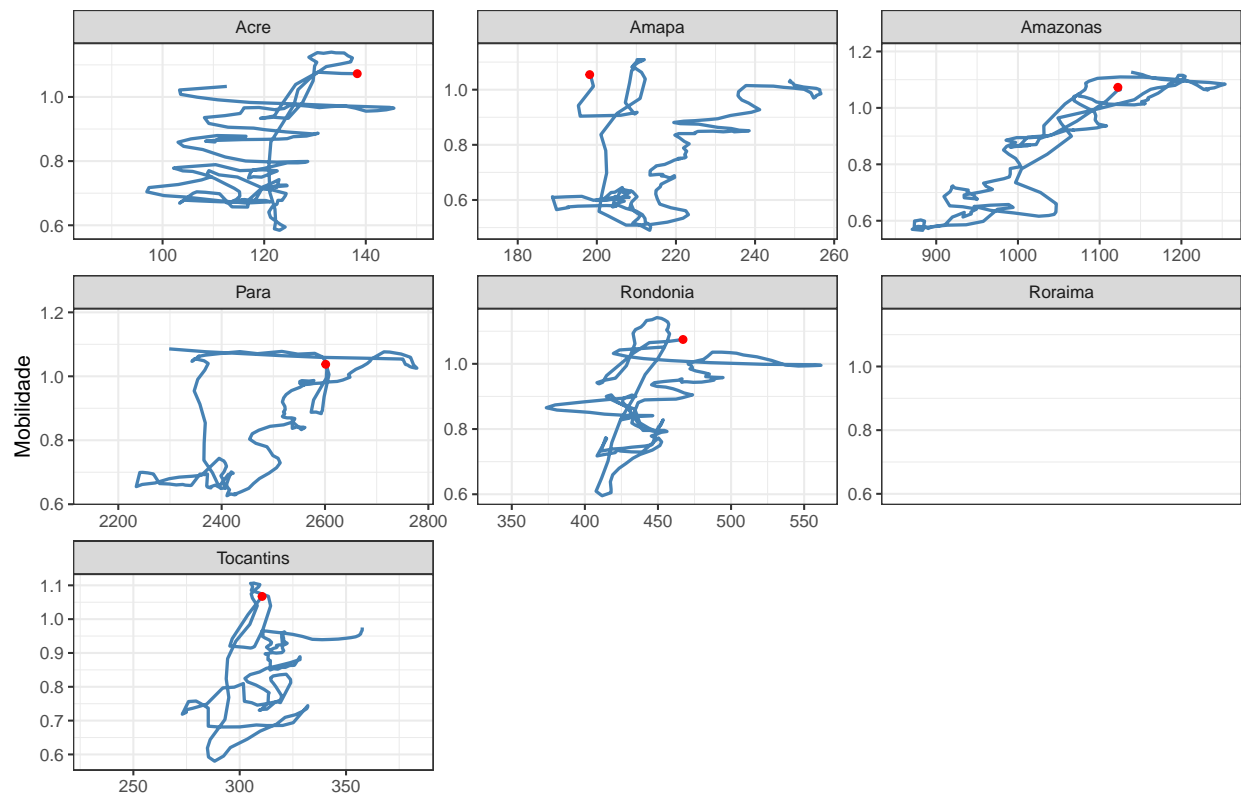
Região Nordeste



Somente ACL

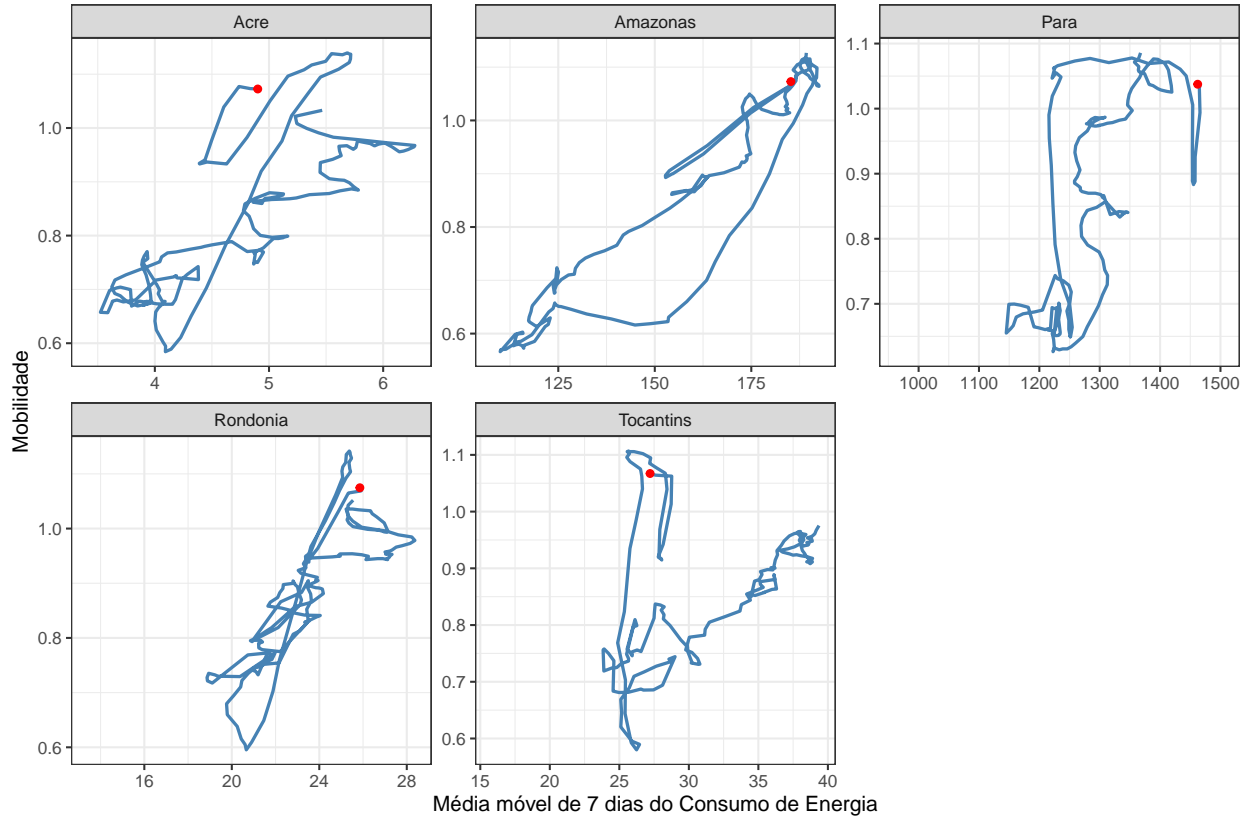


Região Norte



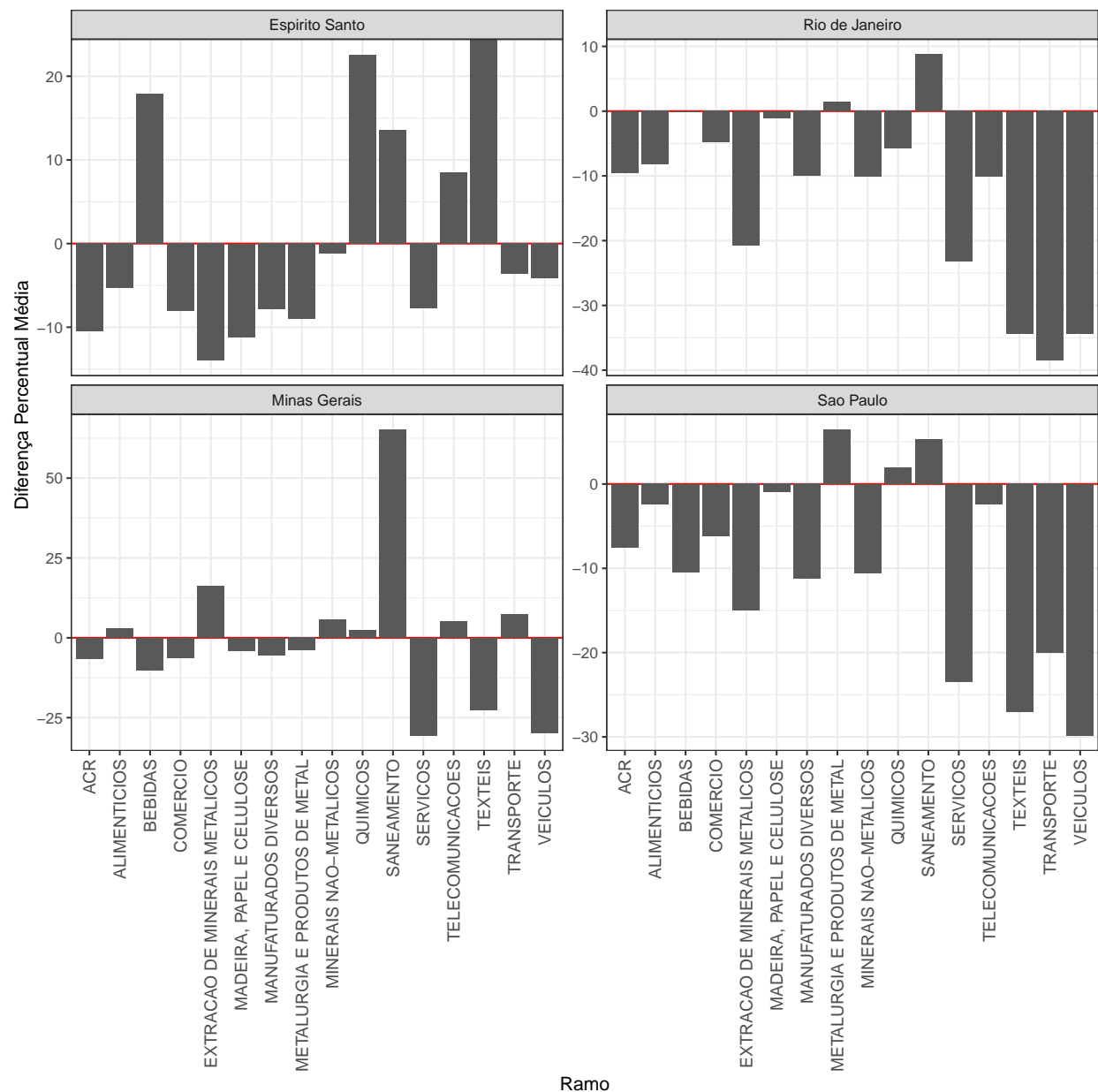
Média móvel de 7 dias do Consumo de Energia

Somente ACL

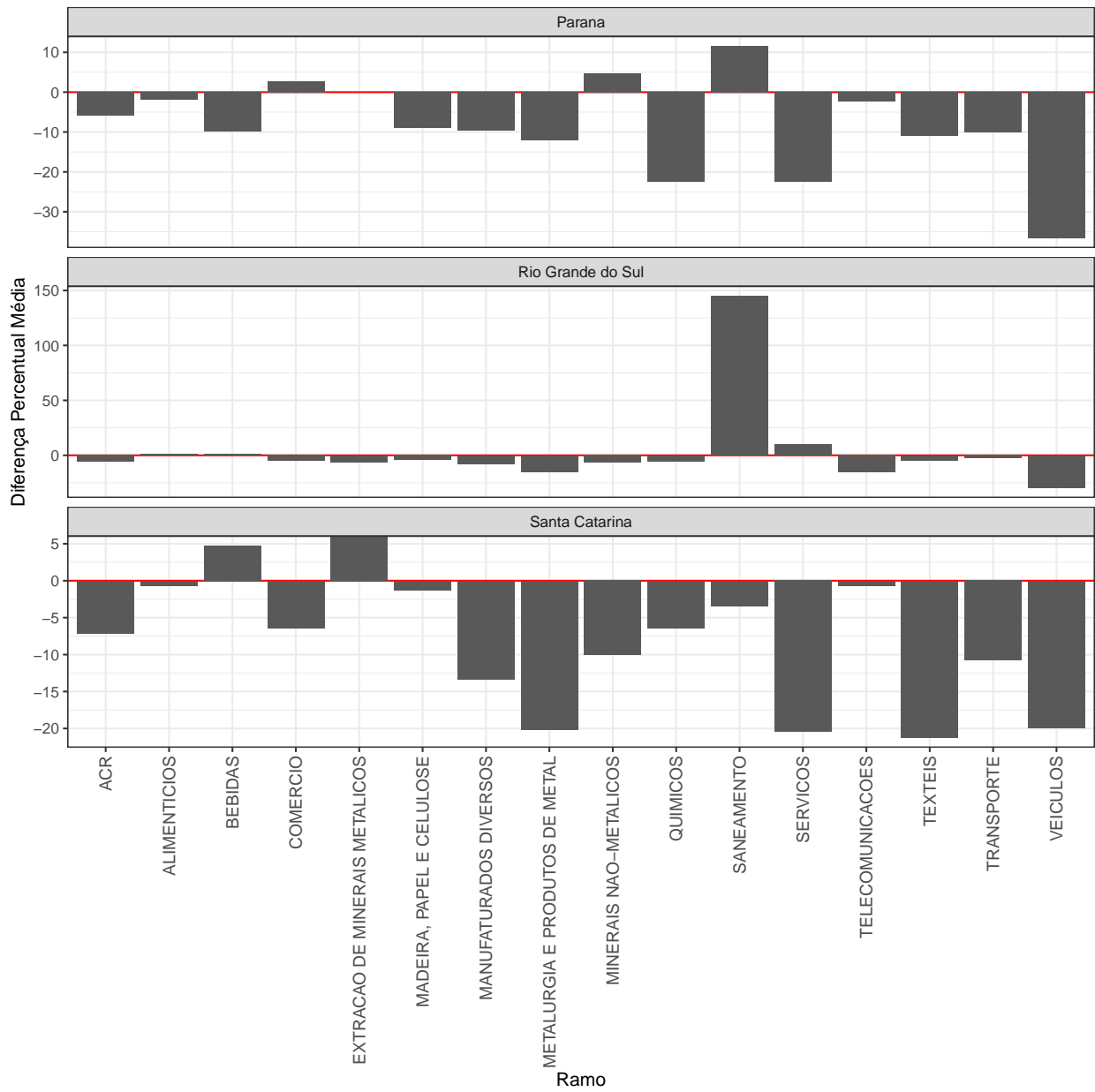


Alteração do nível de consumo por Ramo

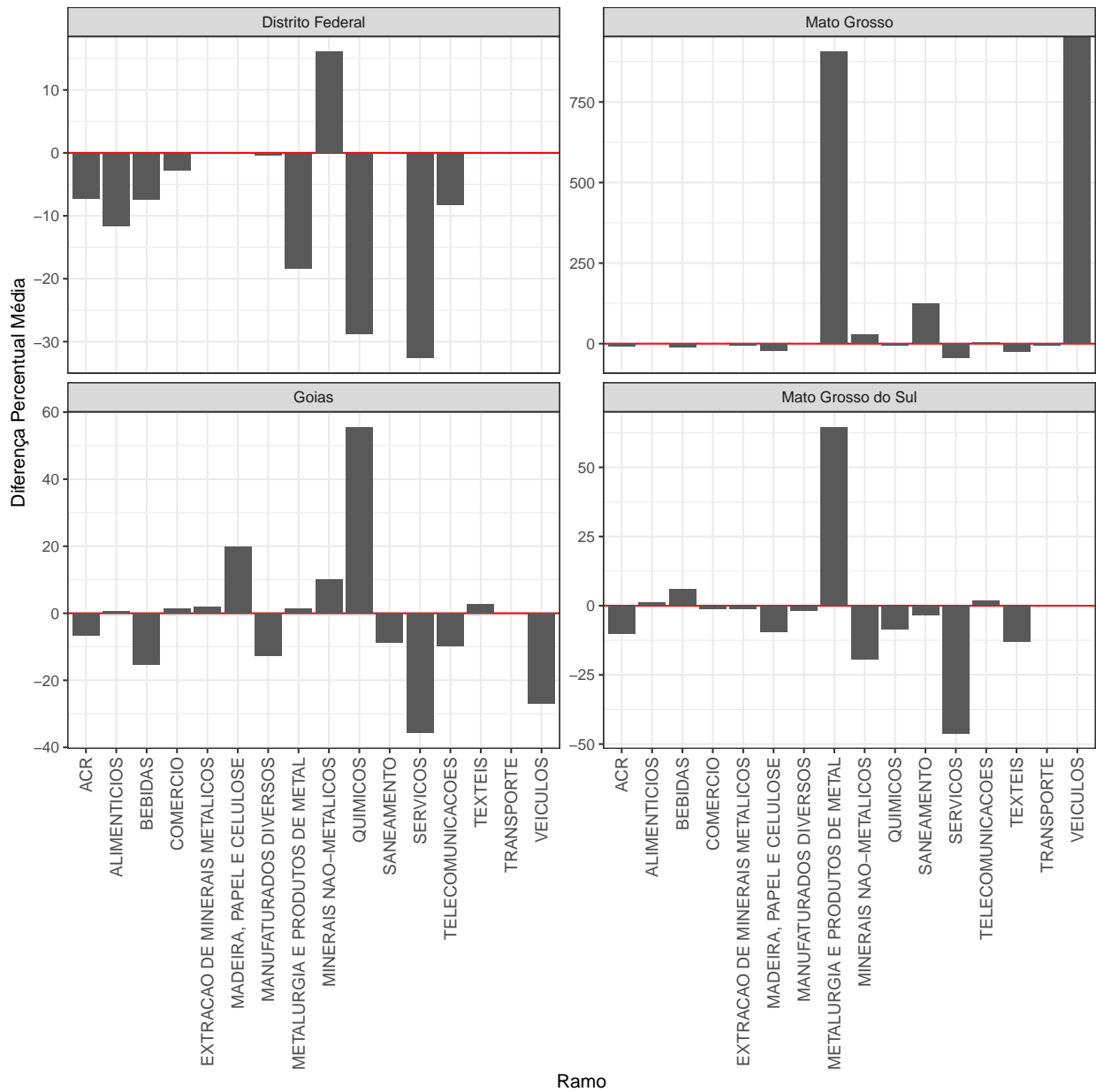
Região Sudeste



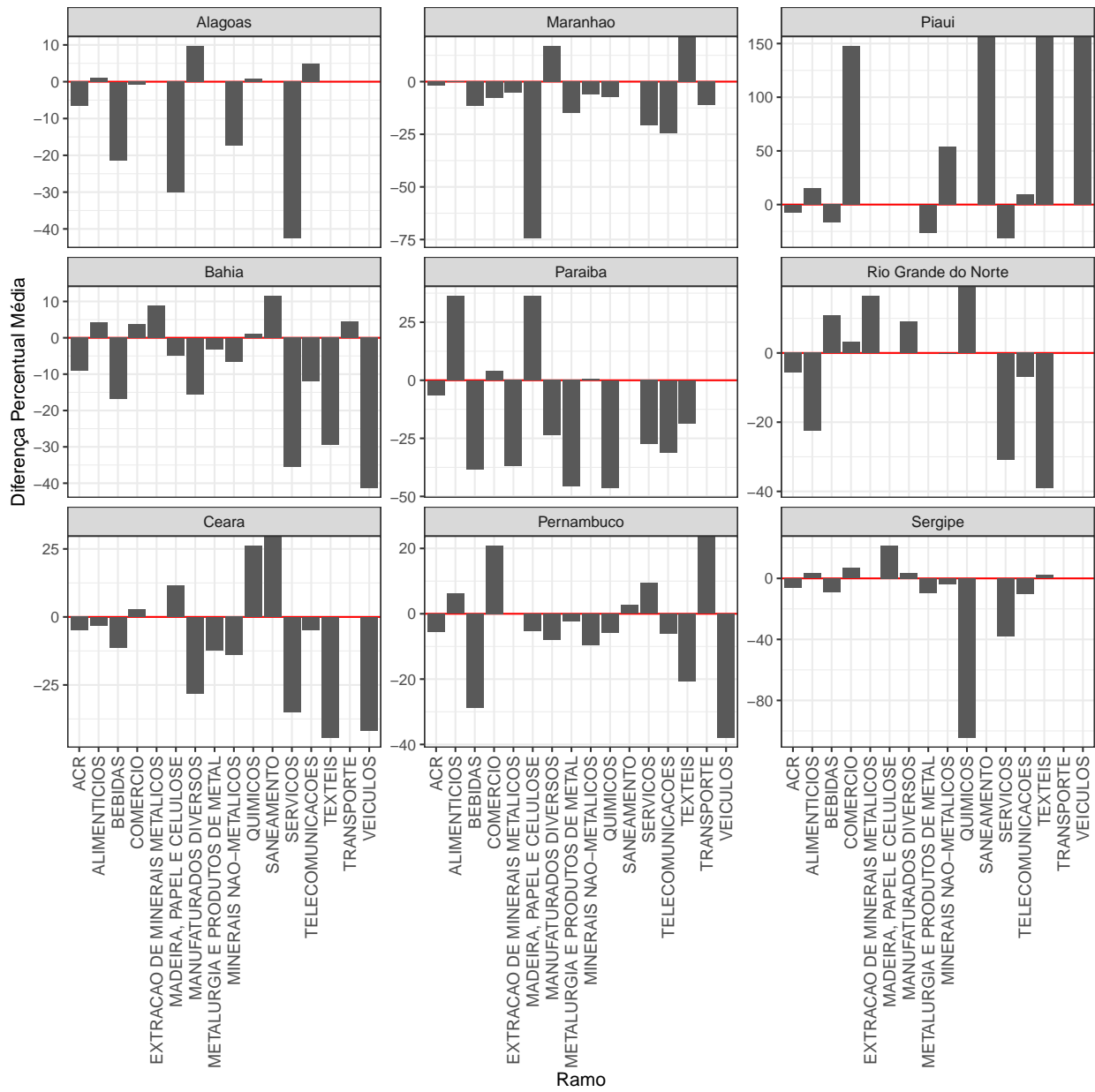
Região Sul



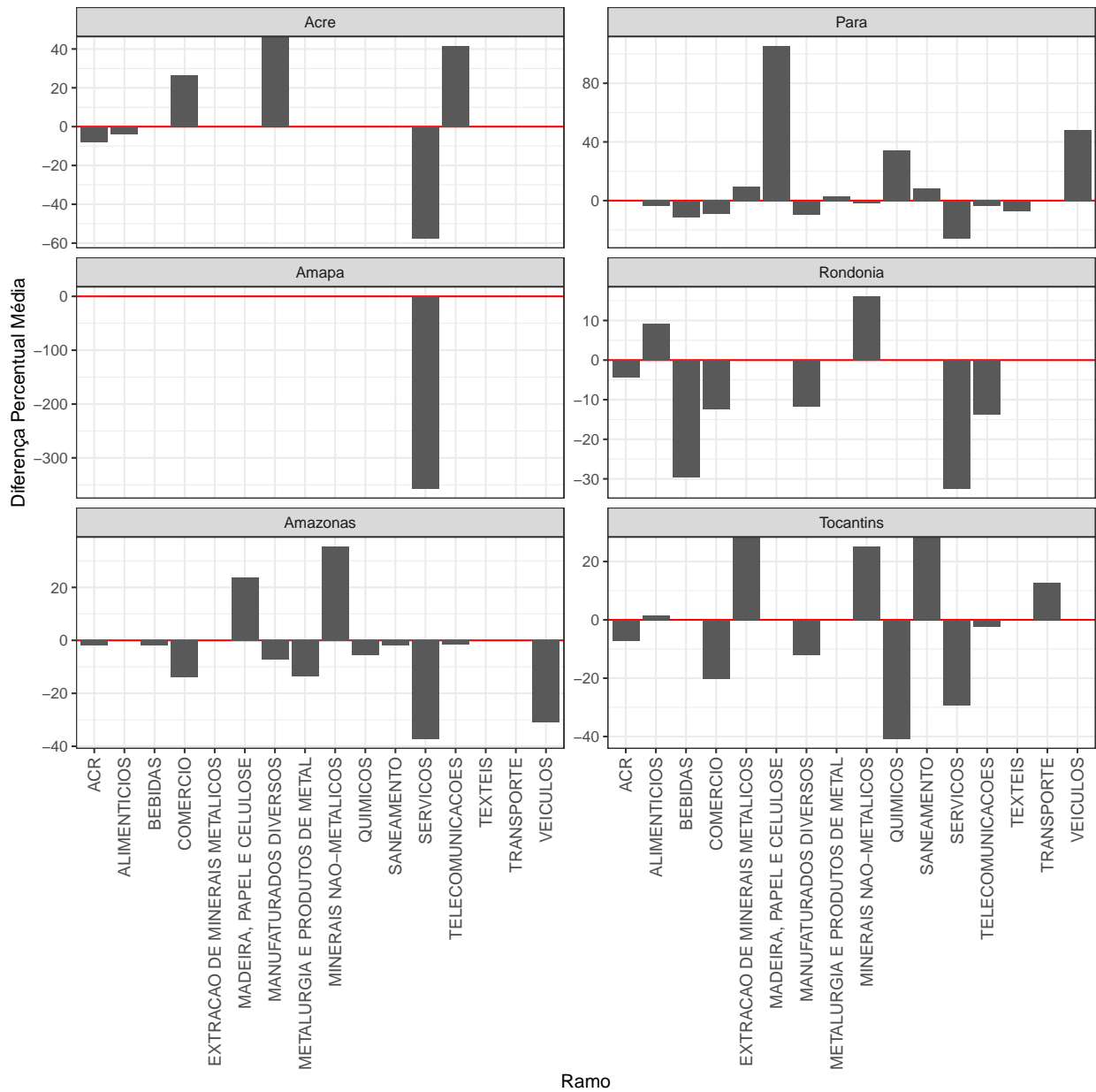
Região Centro-Oeste



Região Nordeste

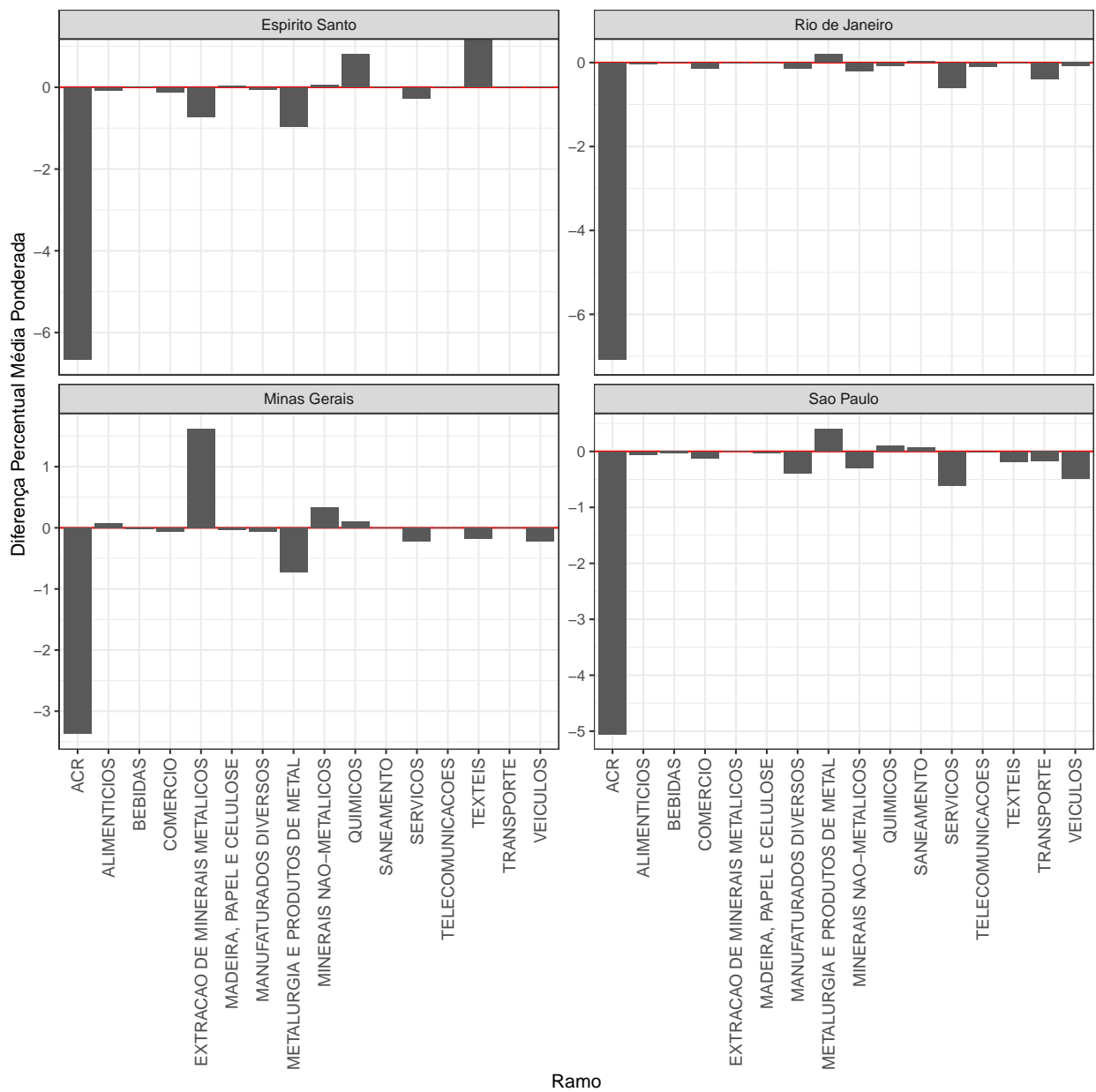


Região Norte

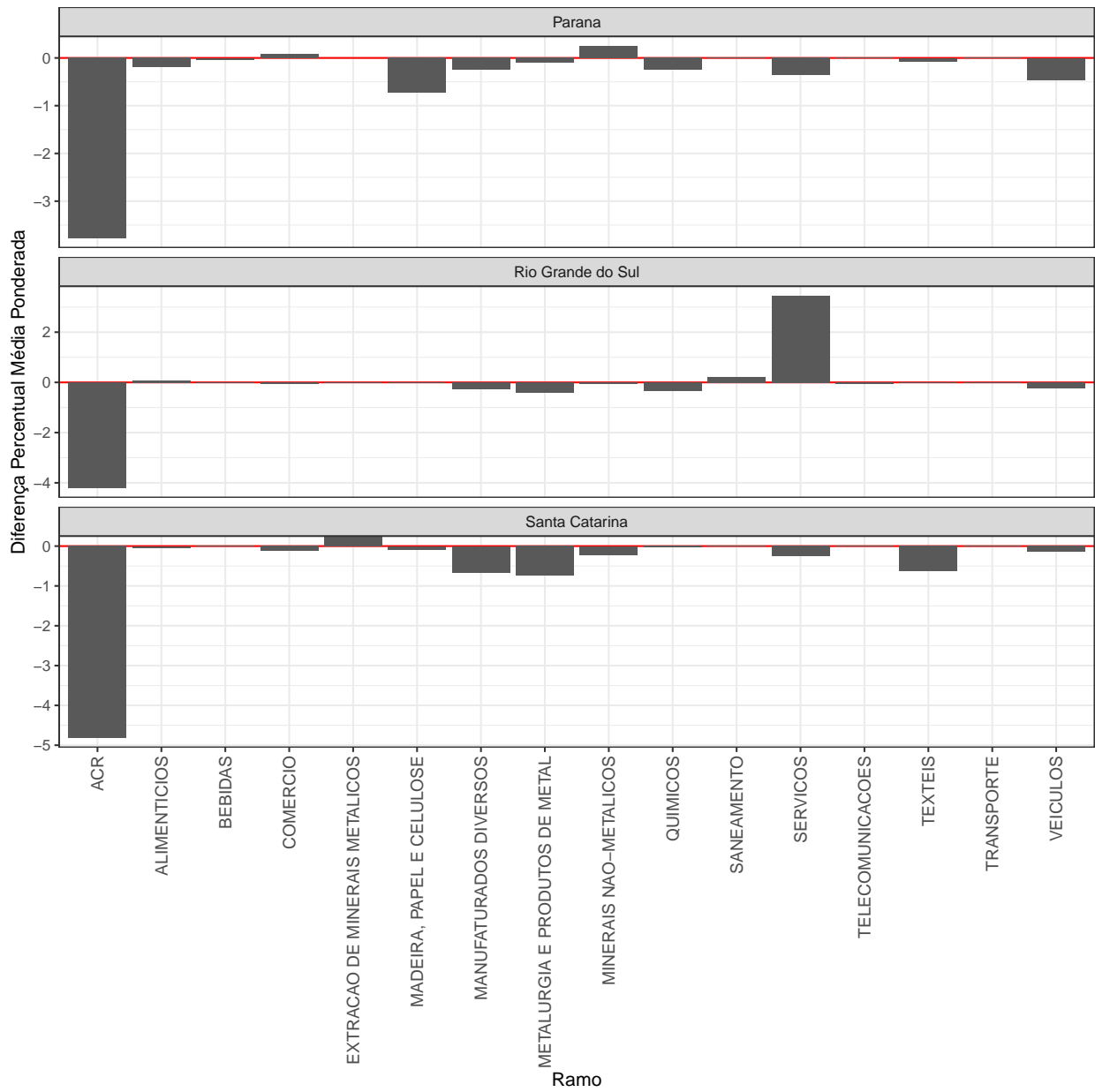


Alteração do nível de consumo por Ramo, ponderado por proporção do consumo

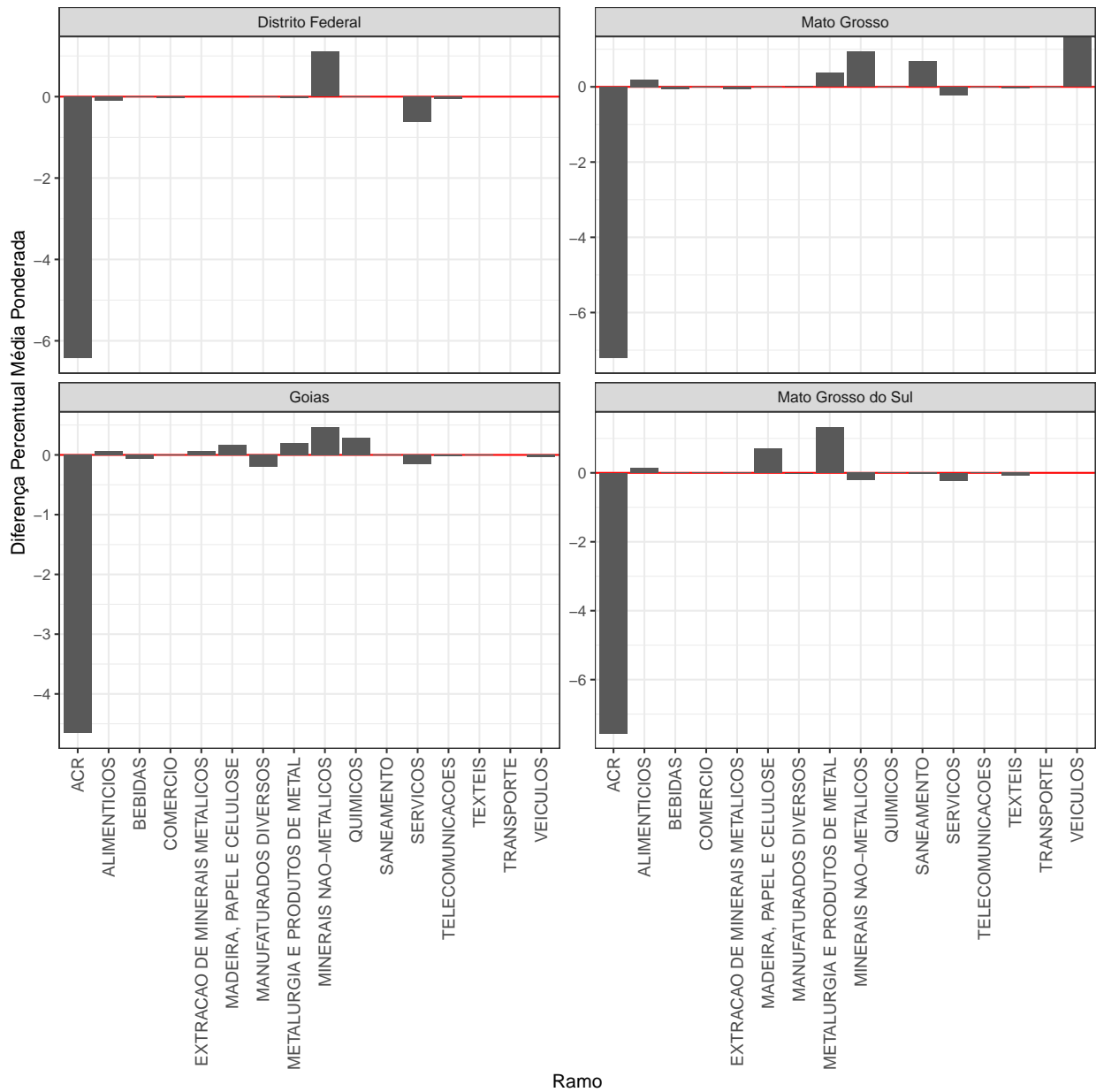
Região Sudeste



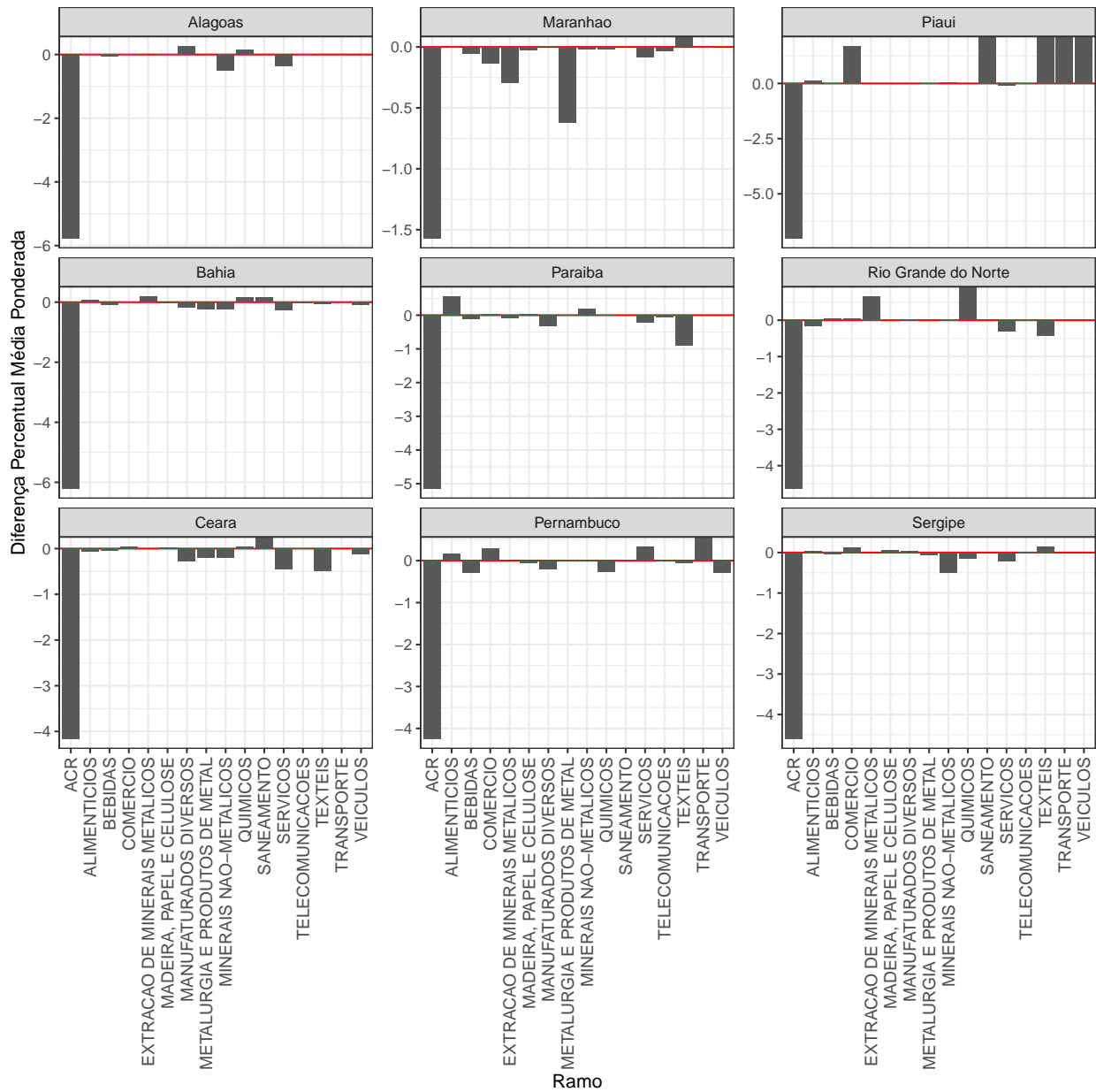
Região Sul



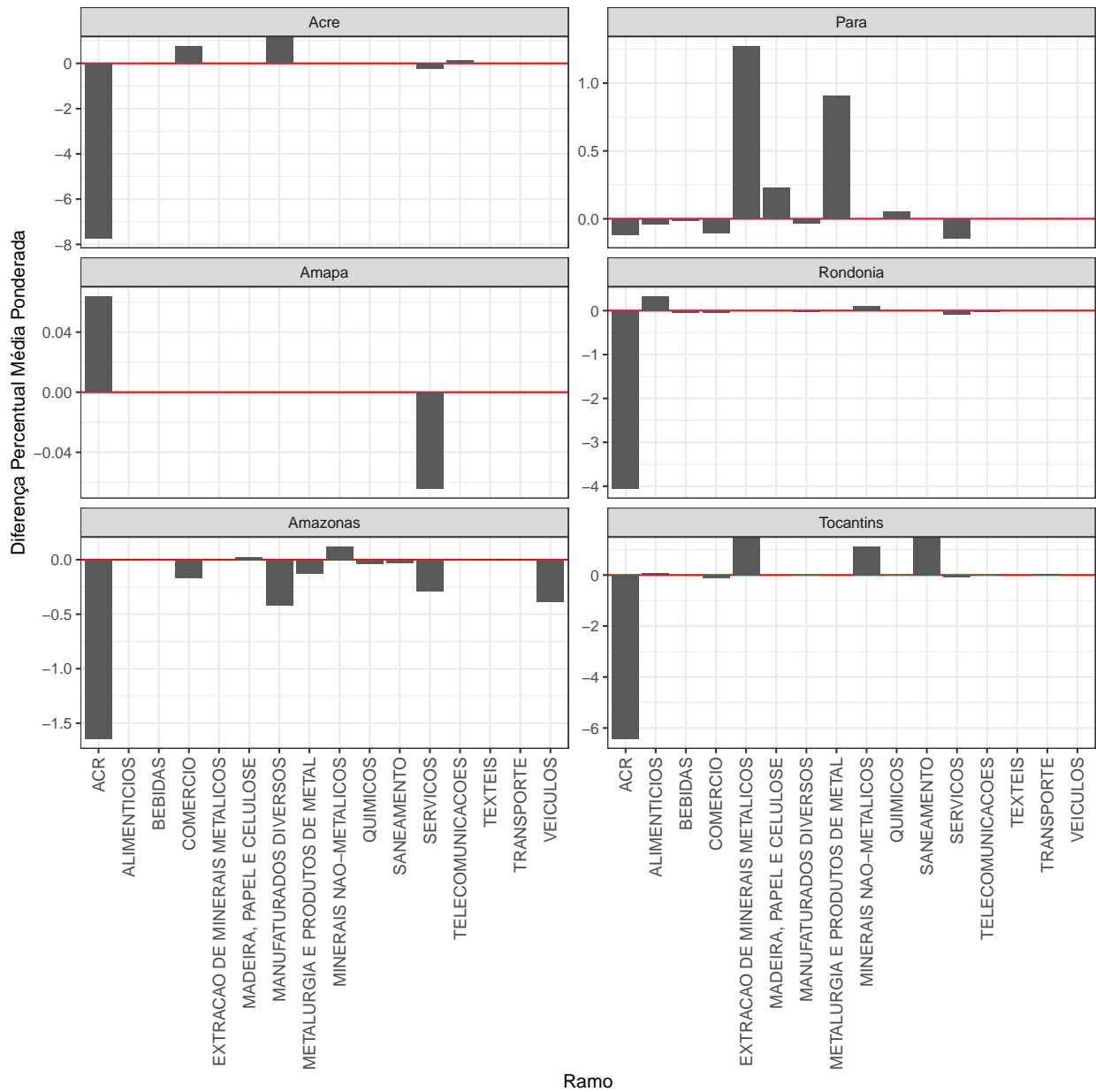
Região Centro-Oeste



Região Nordeste



Região Norte



Relação entre Série de Energia e Composição do PIB?

