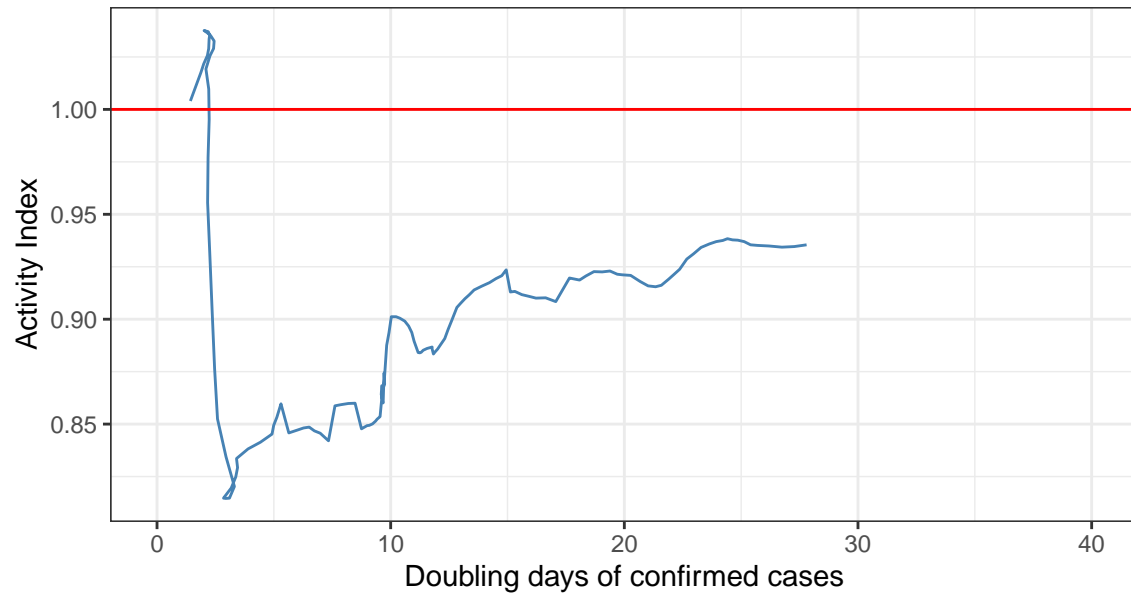


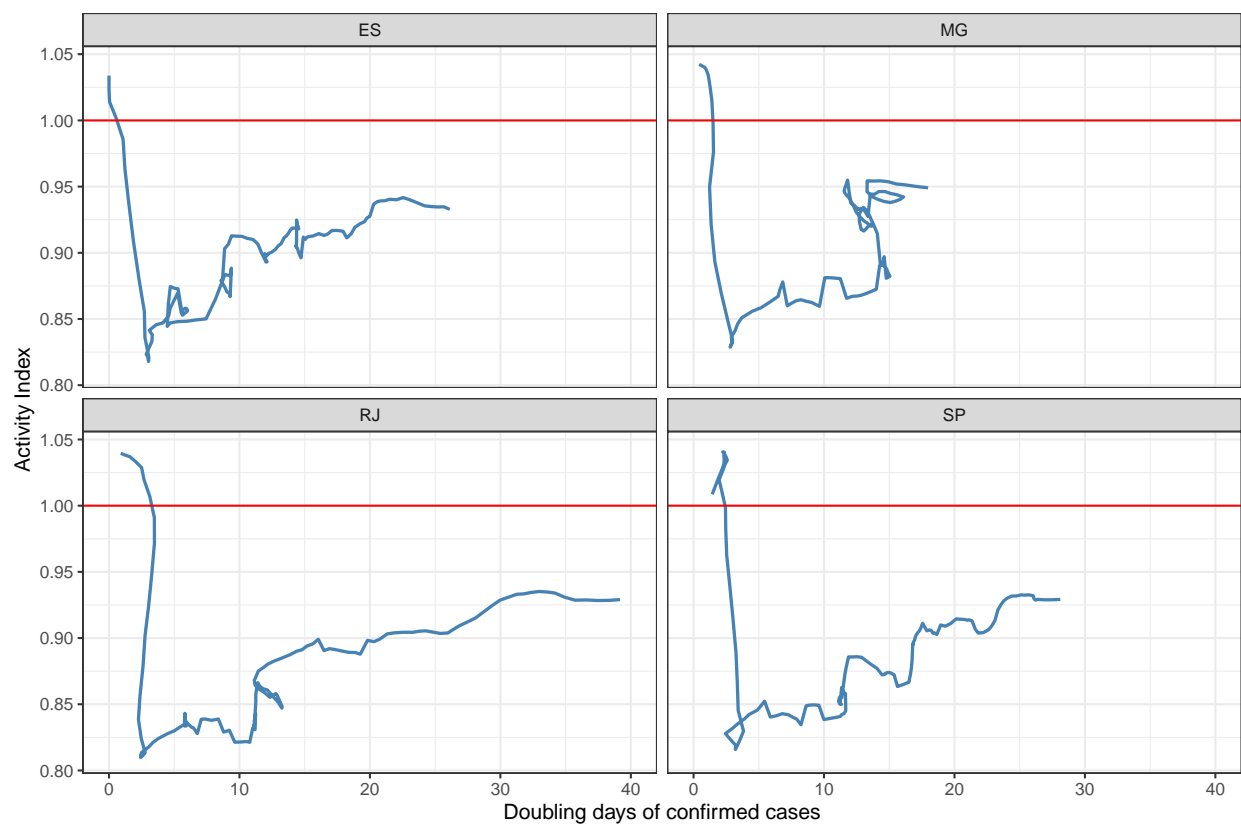
# Atividade x COVID

Usando dados de mobilidade

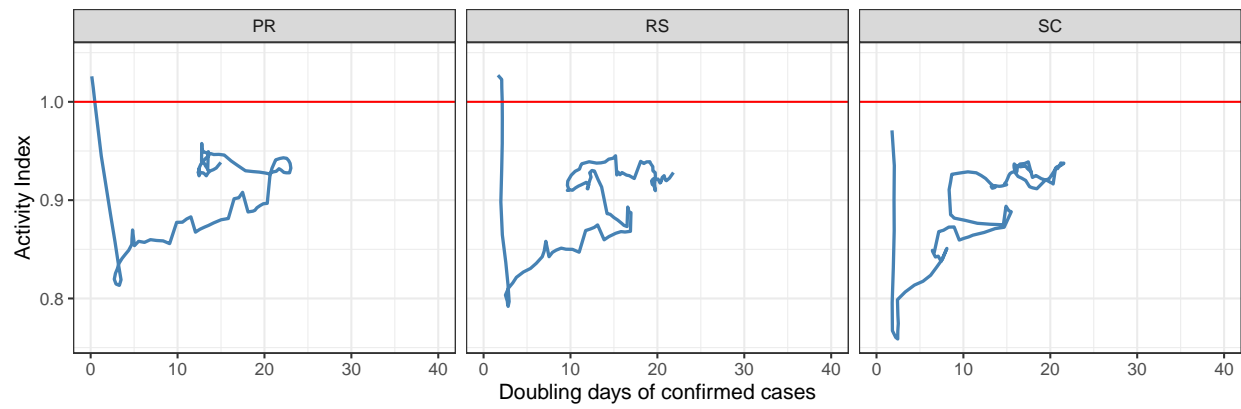
Brasil



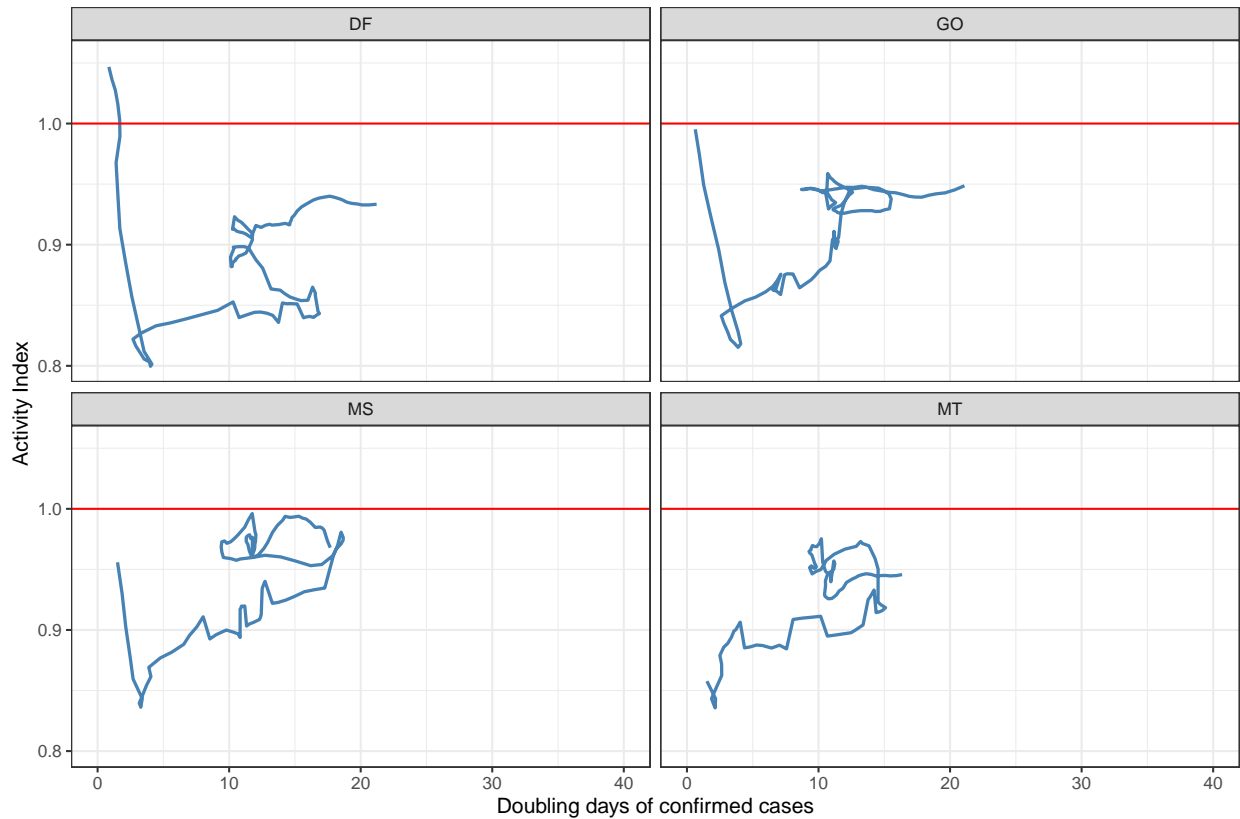
## Região Sudeste



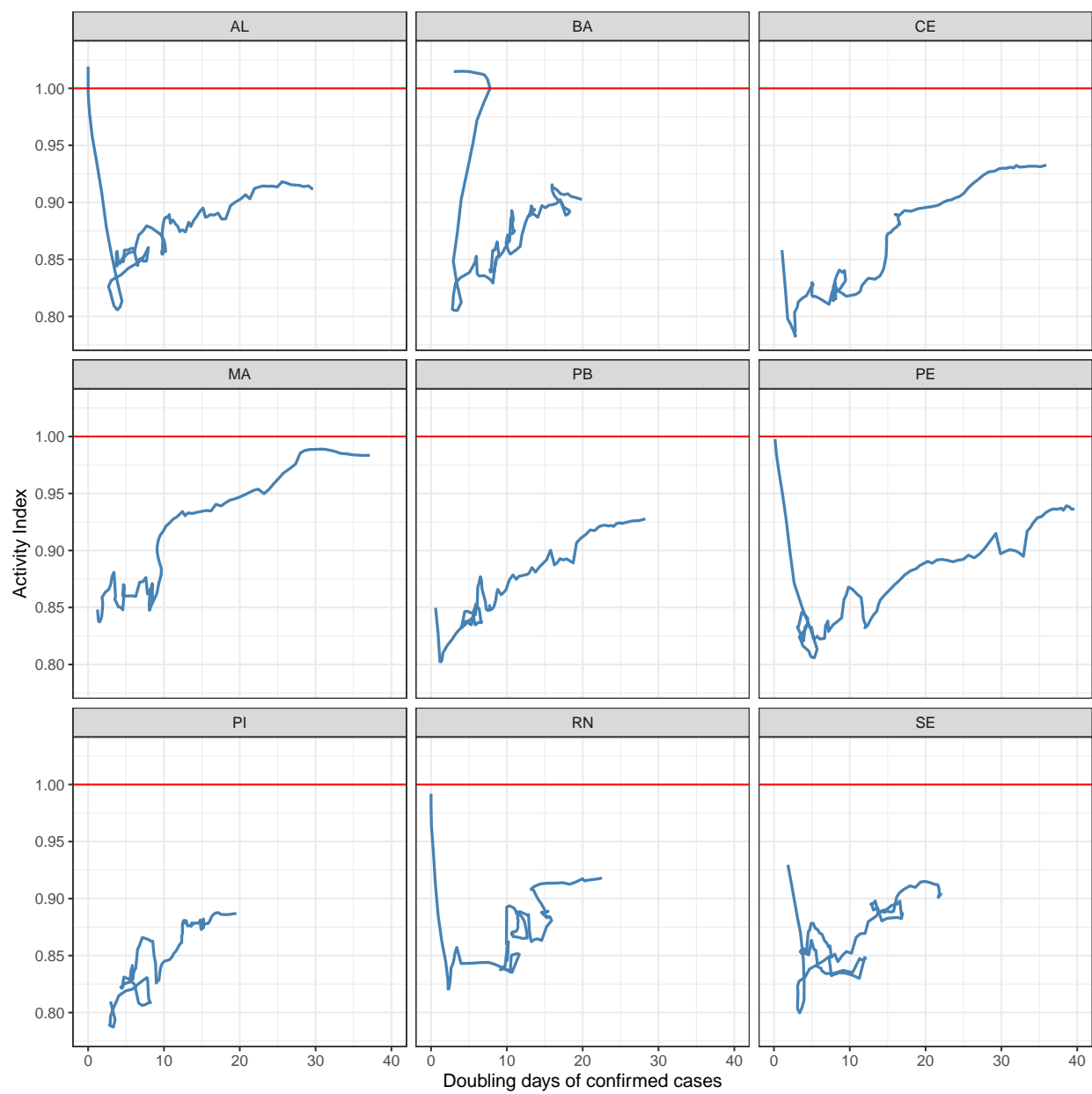
## Região Sul



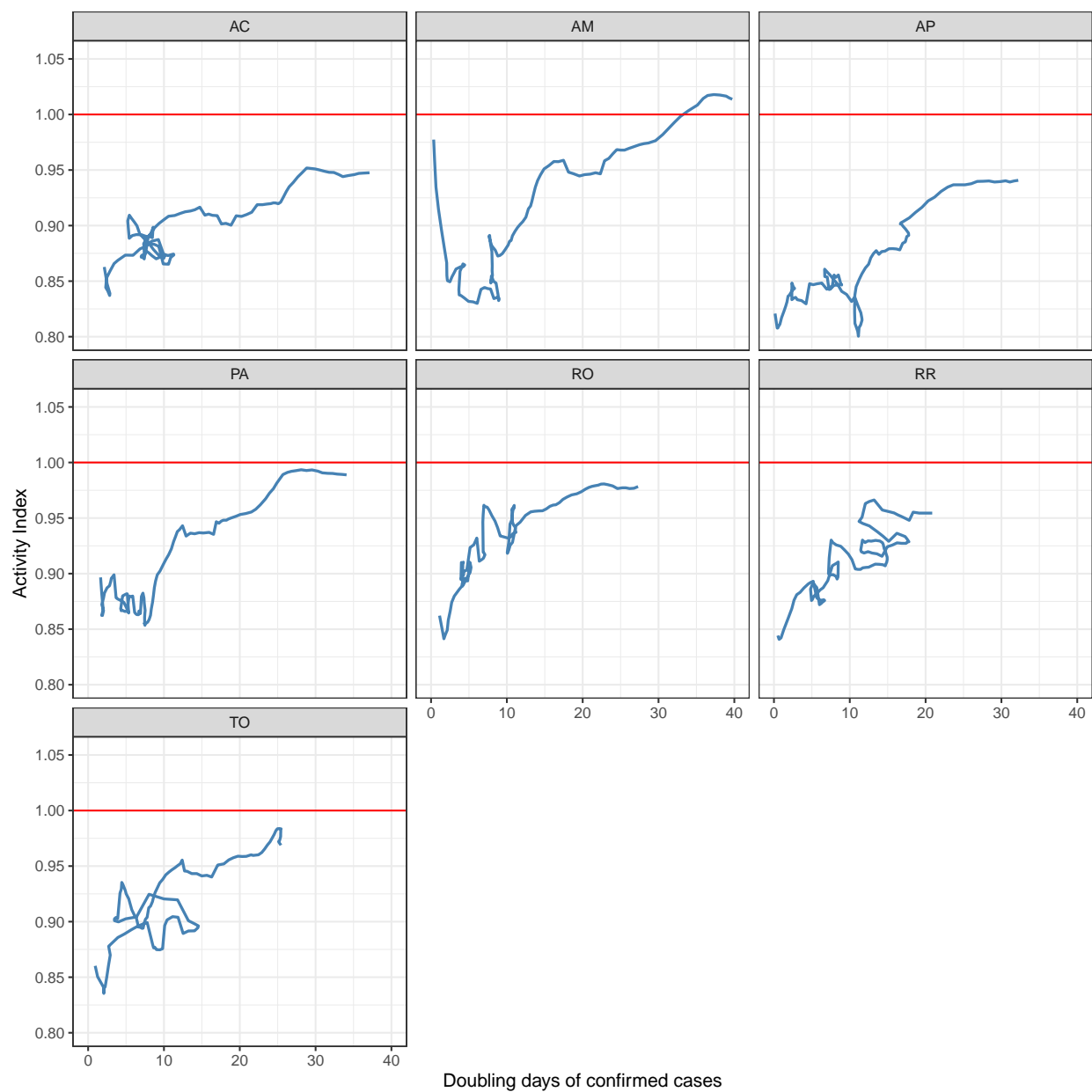
Região Centro-Oeste



## Região Nordeste



## Região Norte



## Usando dados de energia

Trocando os dados de mobilidade pela diferença percentual entre o consumo de energia atual e o esperado.

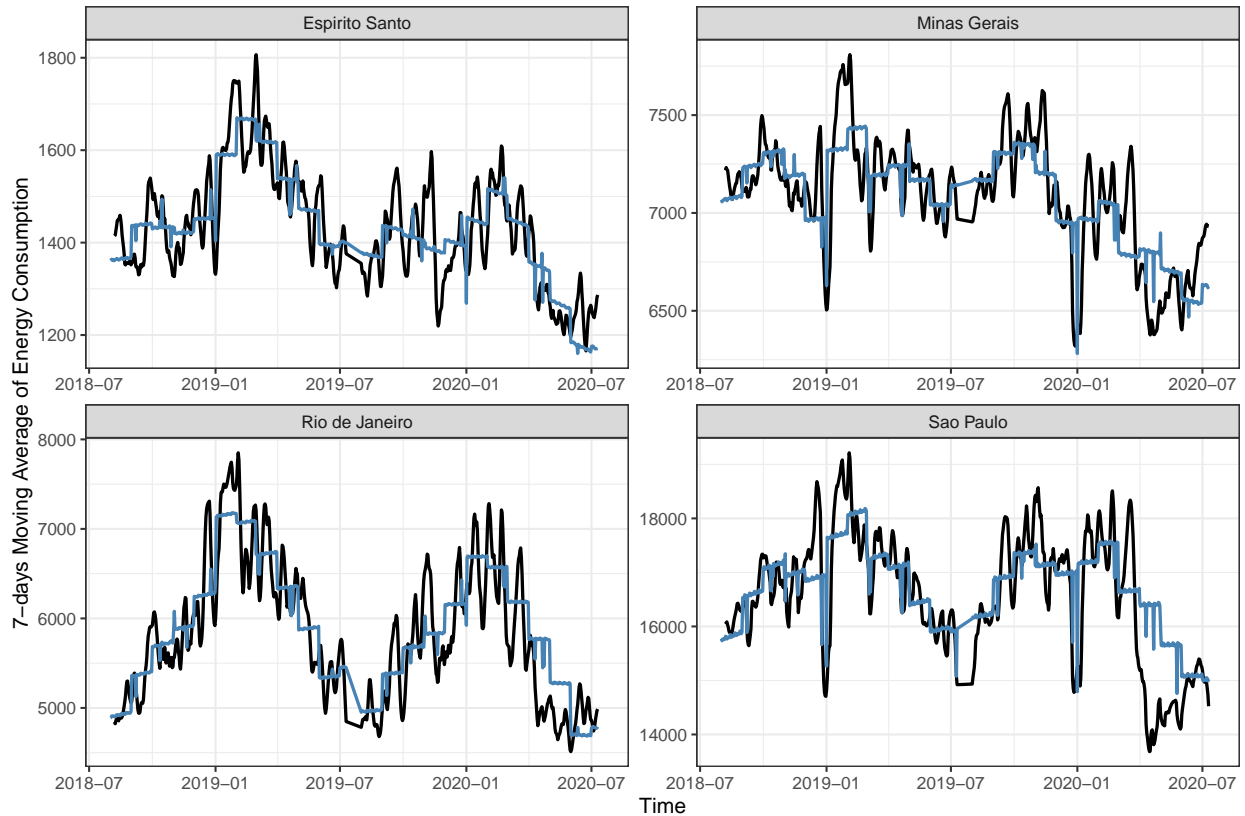
Para definir o contrafactual, fazemos uma regressão para cada estado, com os dados de 08/2018 até 02/2020, da seguinte forma:

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

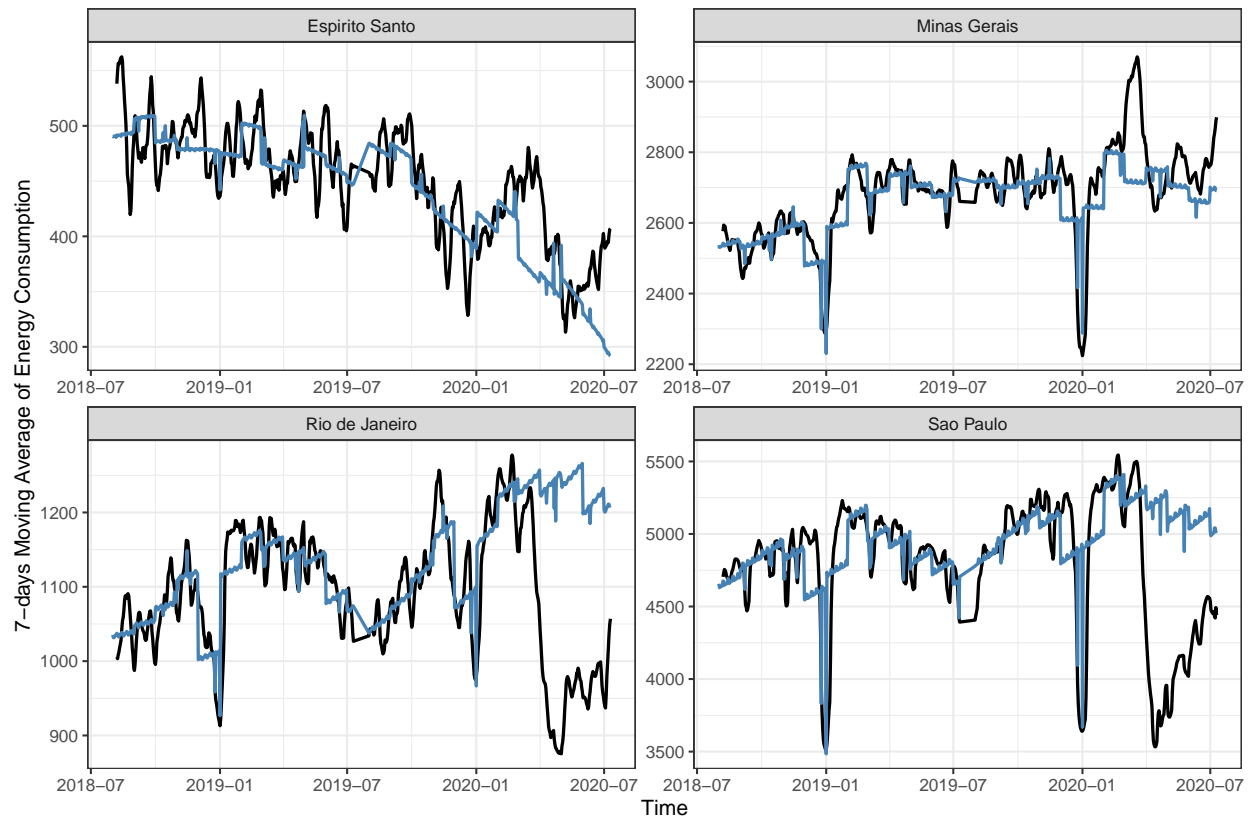
A partir de 1, usamos os valores preditos para os dados a partir de Março de 2020 como o esperado para o consumo de energia. A diferença percentual mostrada nos gráficos abaixo se baseia nesses valores.

## Testando o fit

### Região Sudeste

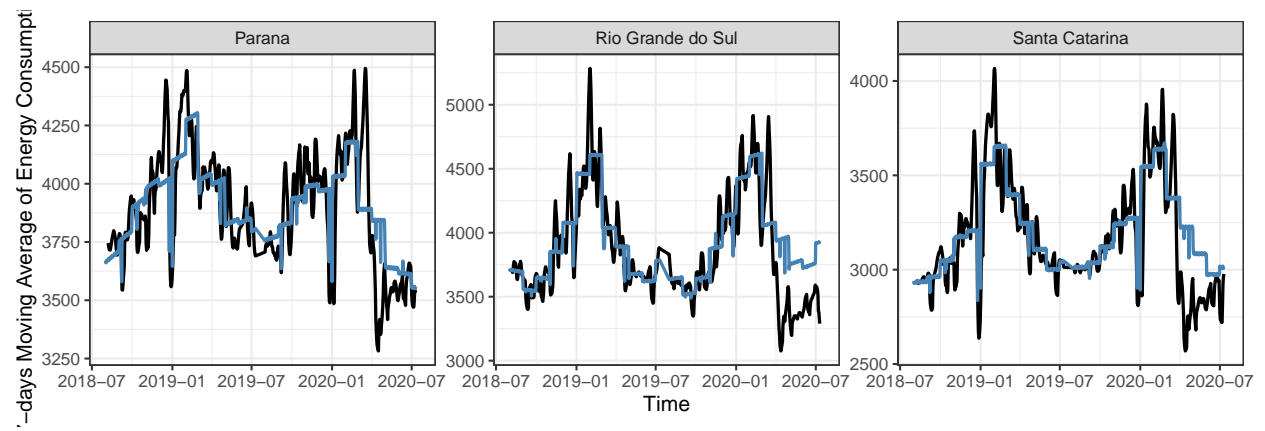


## Somente ACL

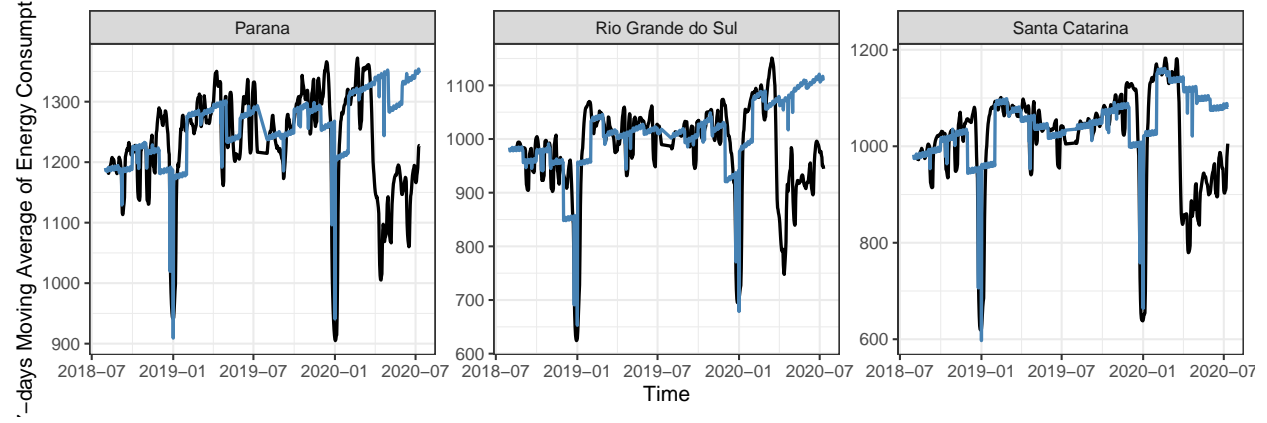




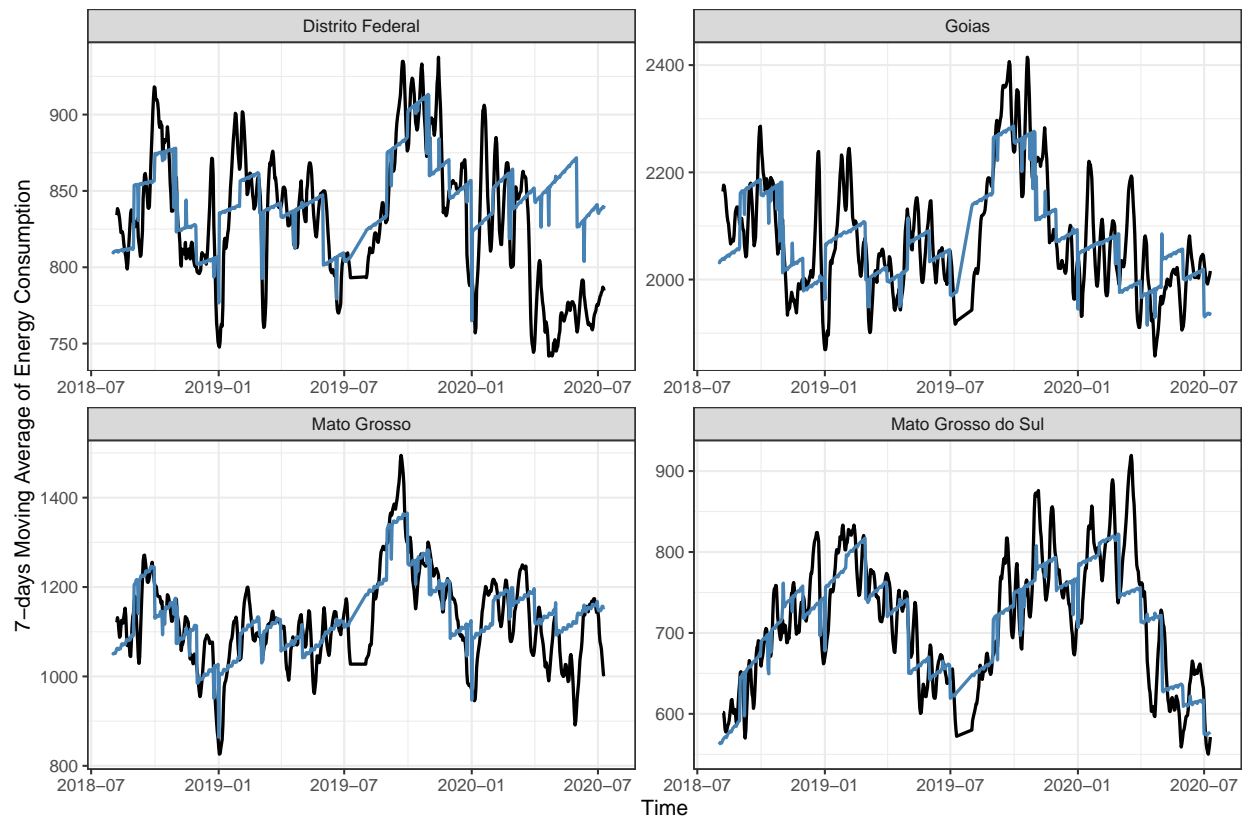
## Região Sul



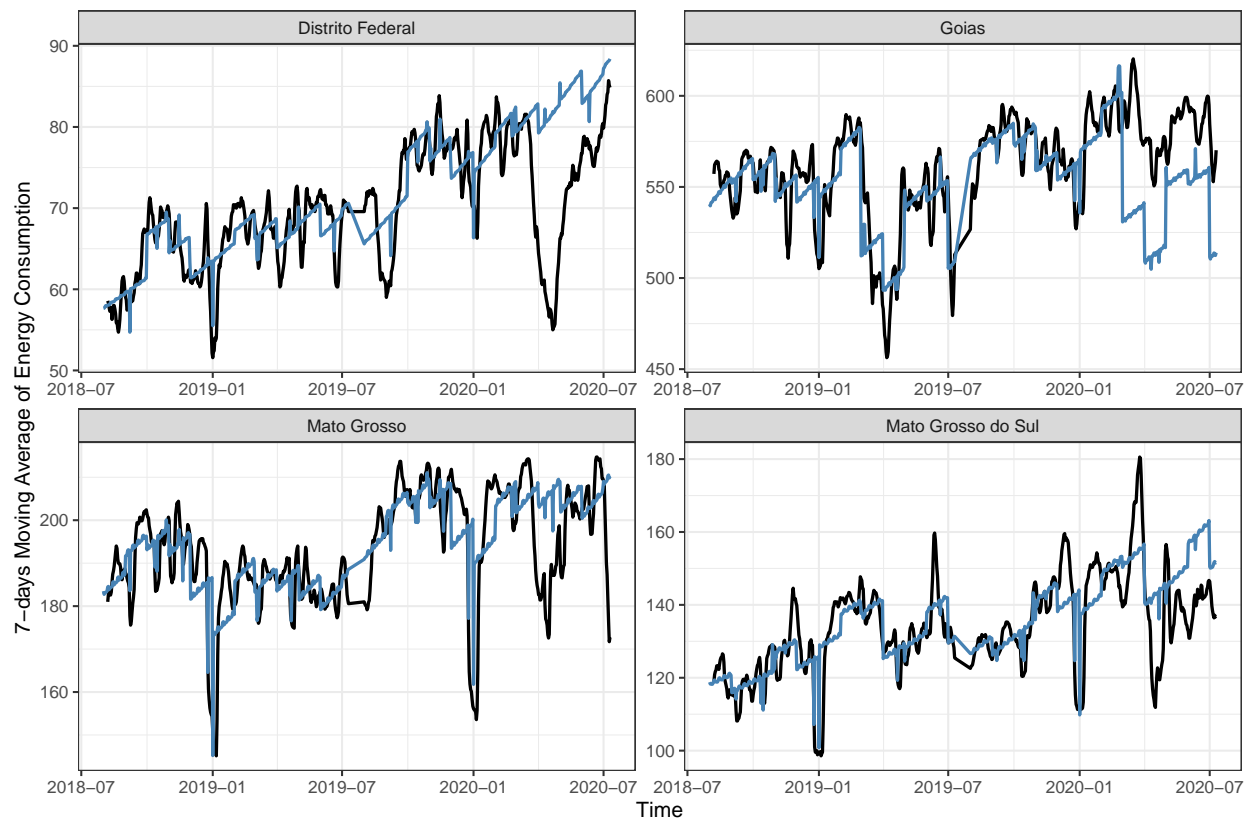
## Somente ACL



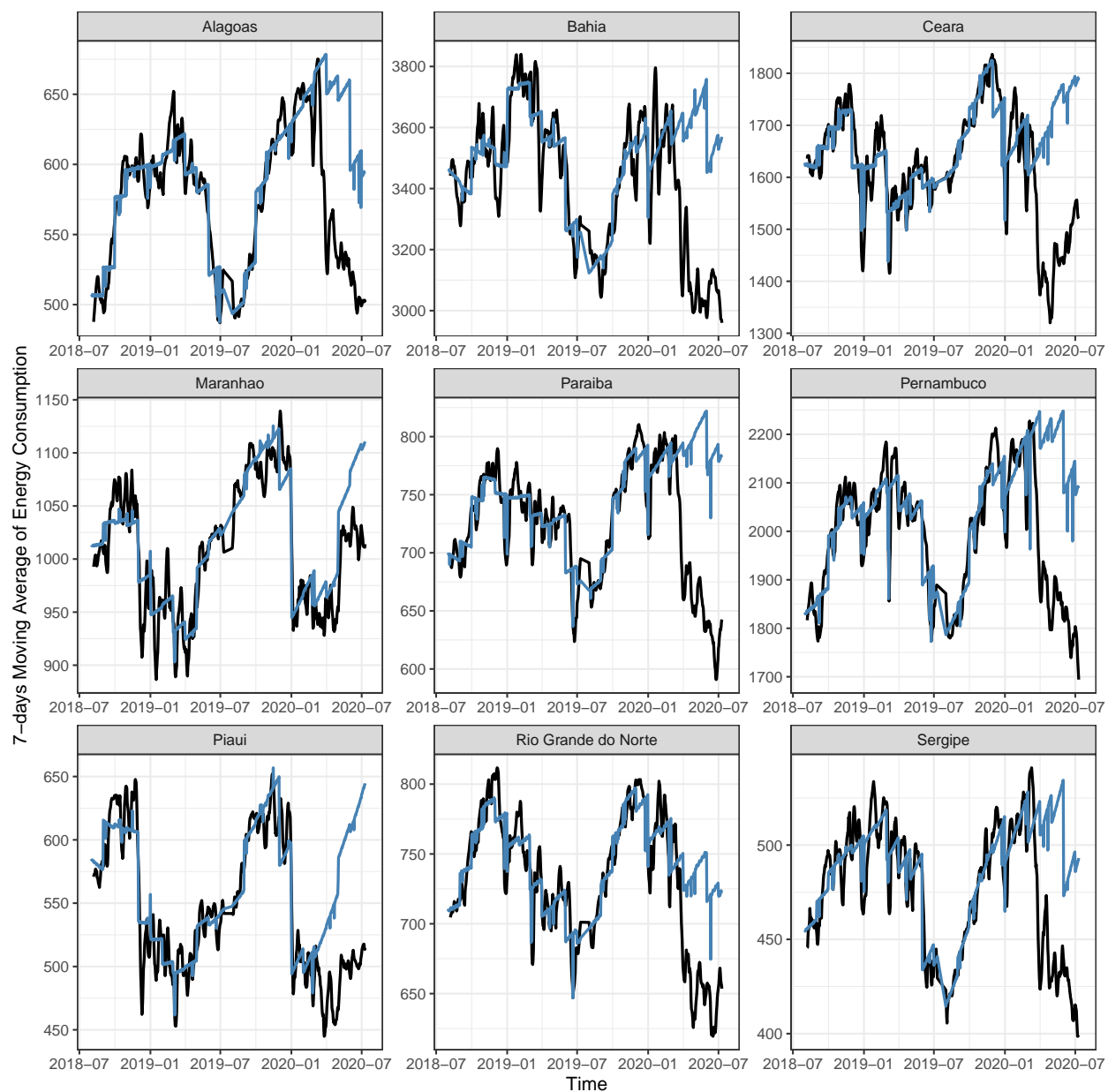
## Região Centro-Oeste



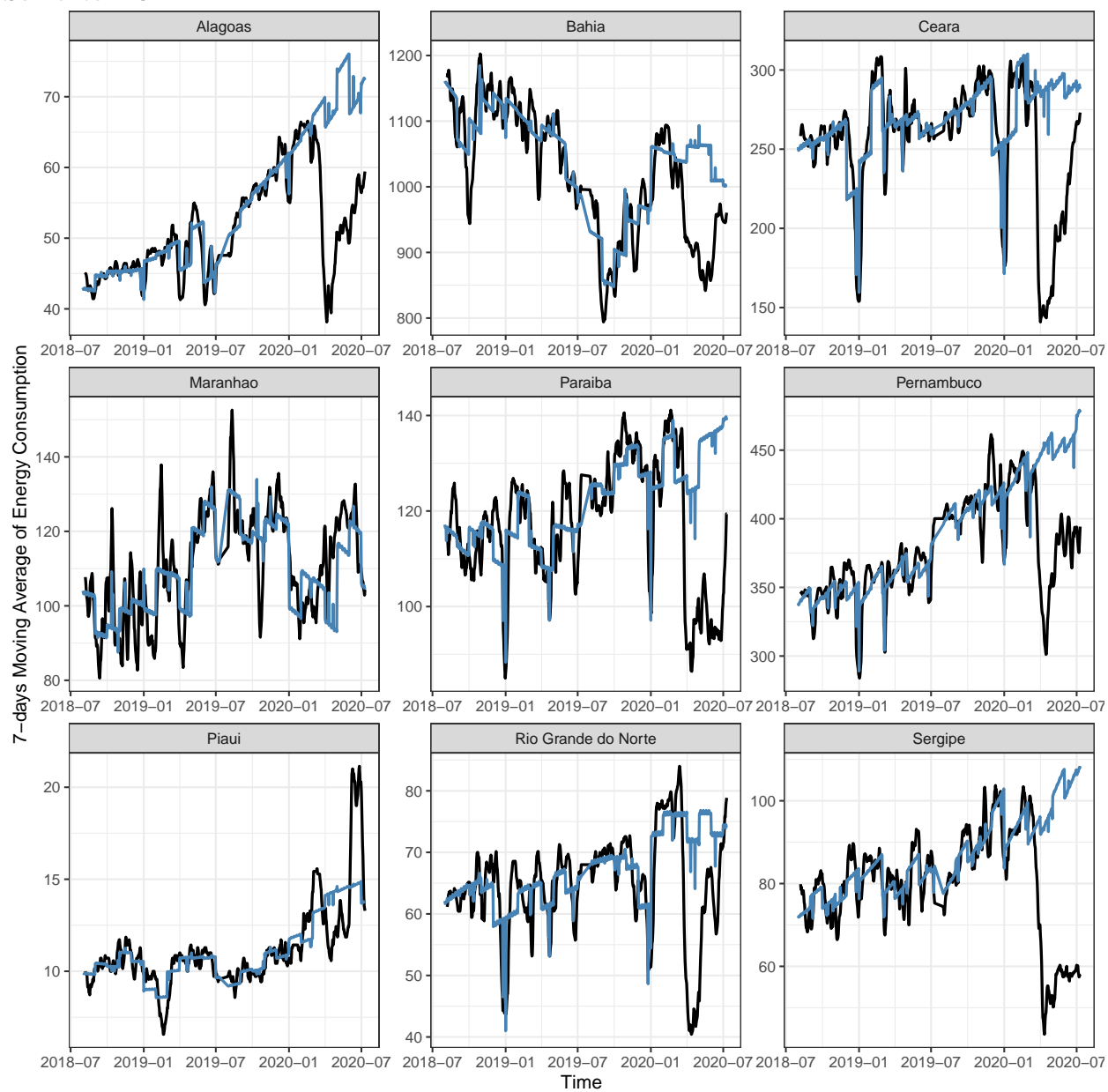
## Somente ACL



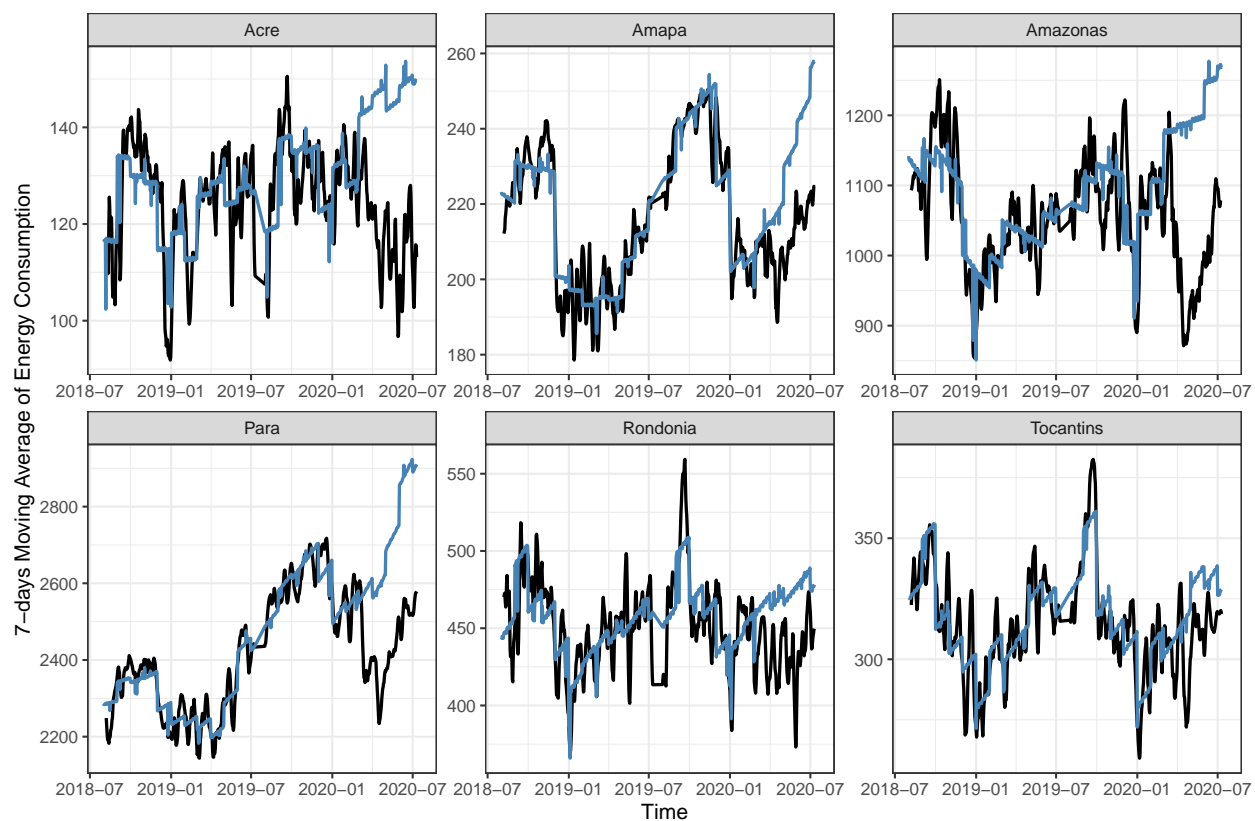
## Região Nordeste



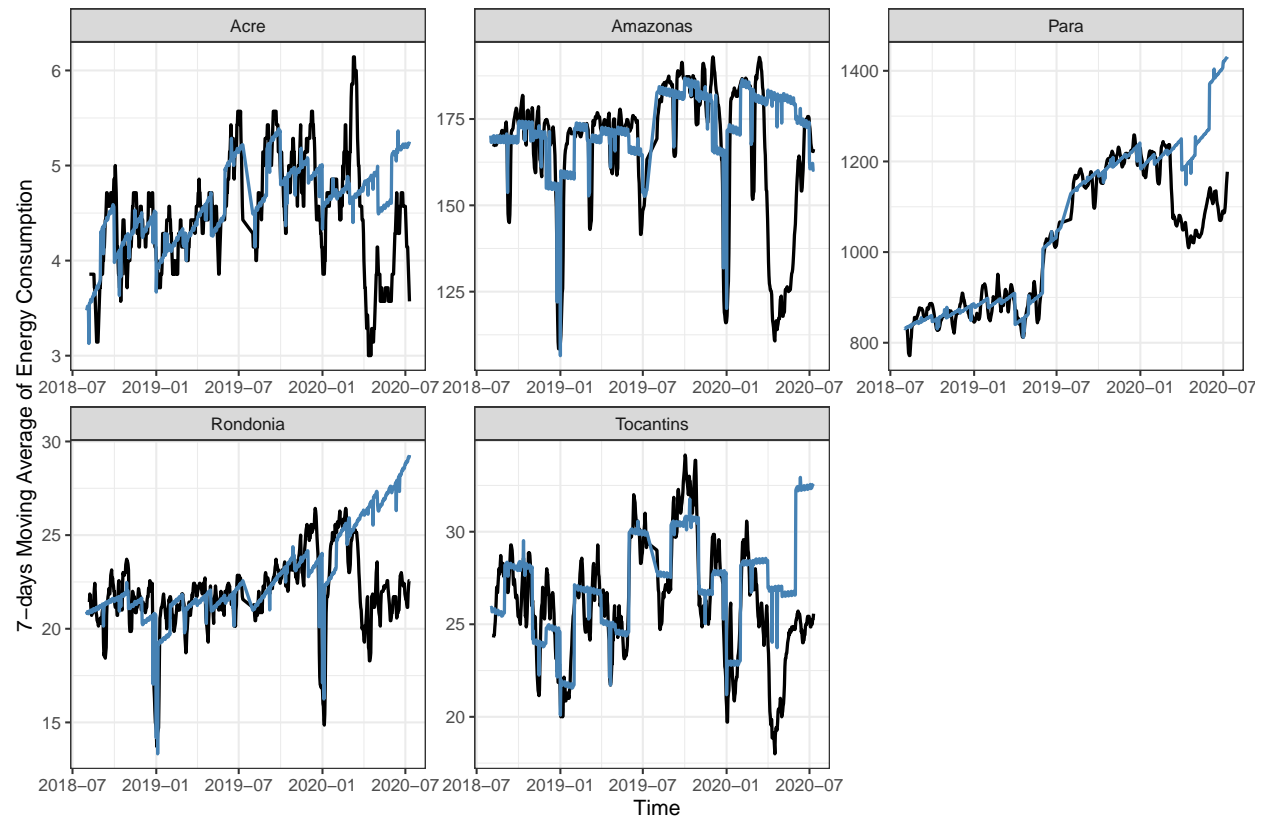
## Somente ACL



## Região Norte



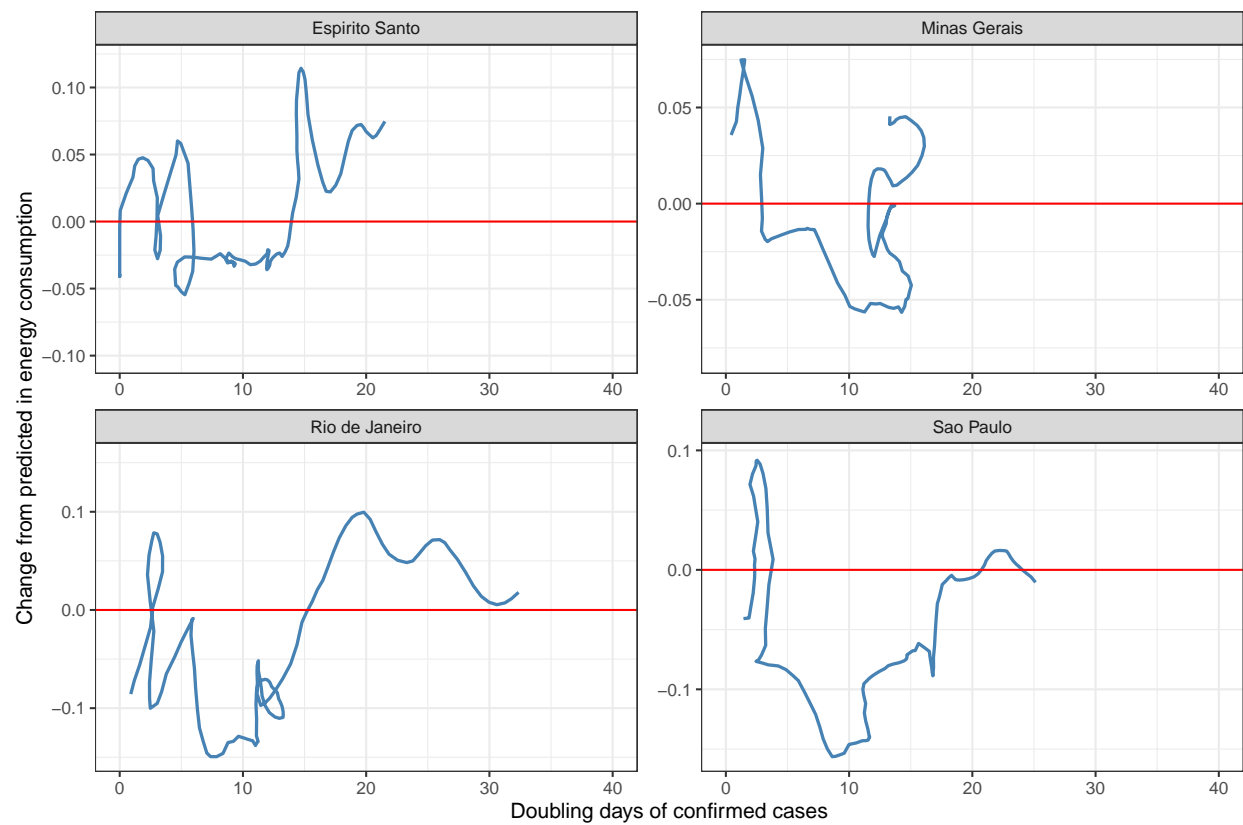
## Somente ACL



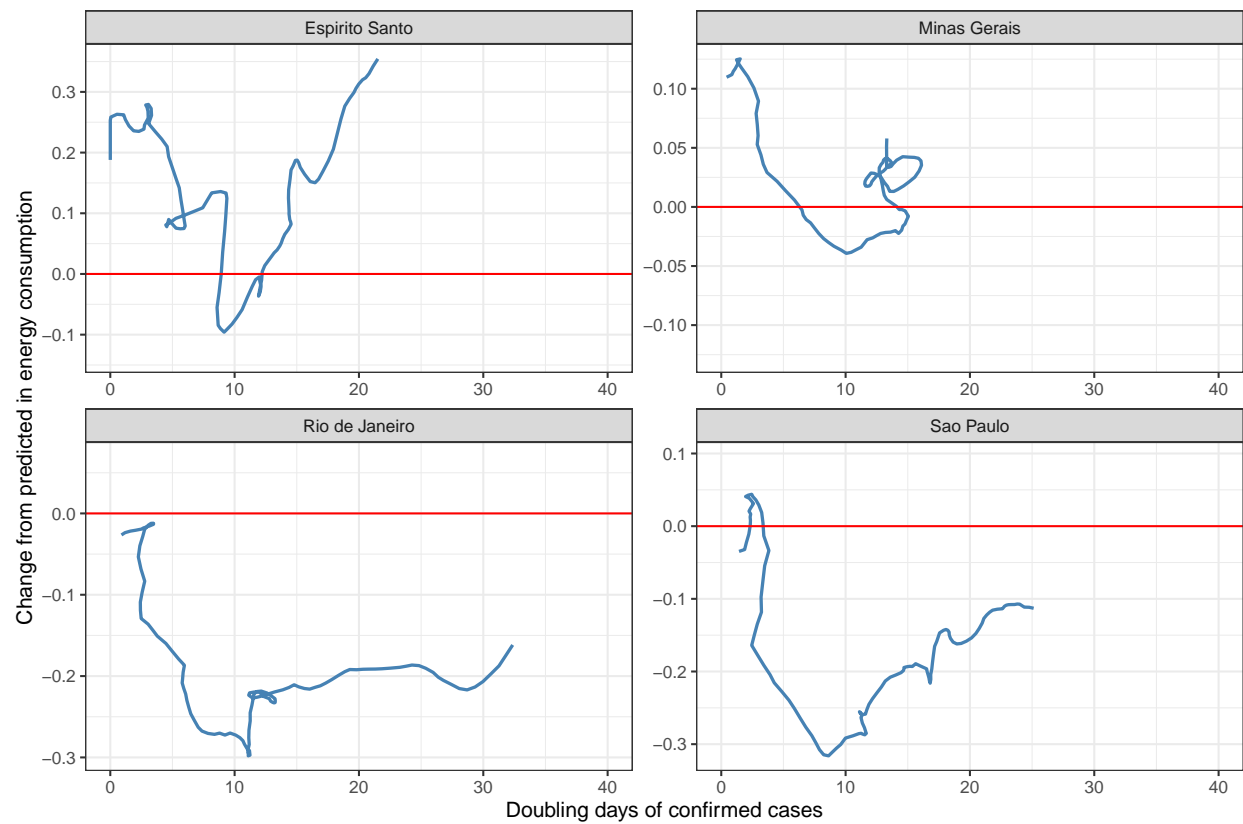


# Mudança para o previsto

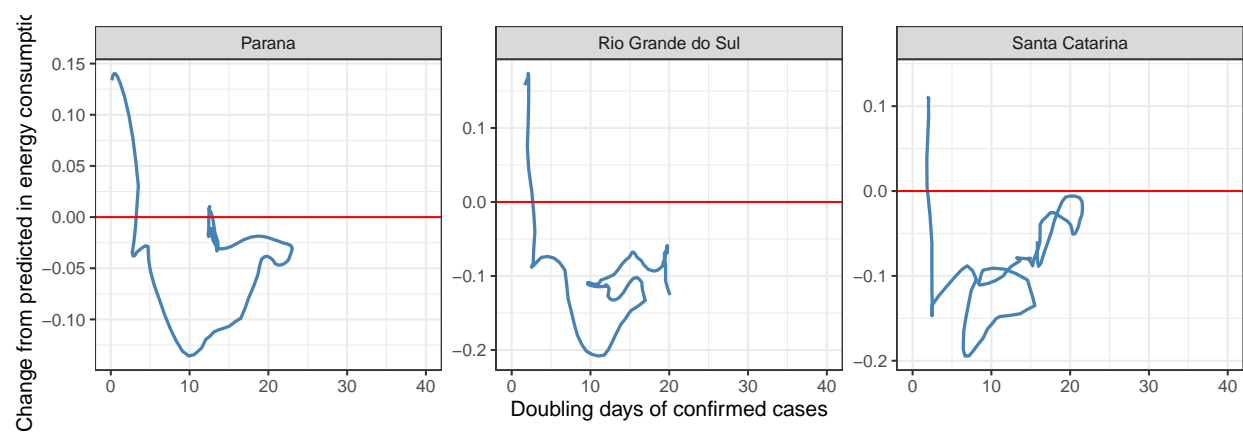
## Região Sudeste



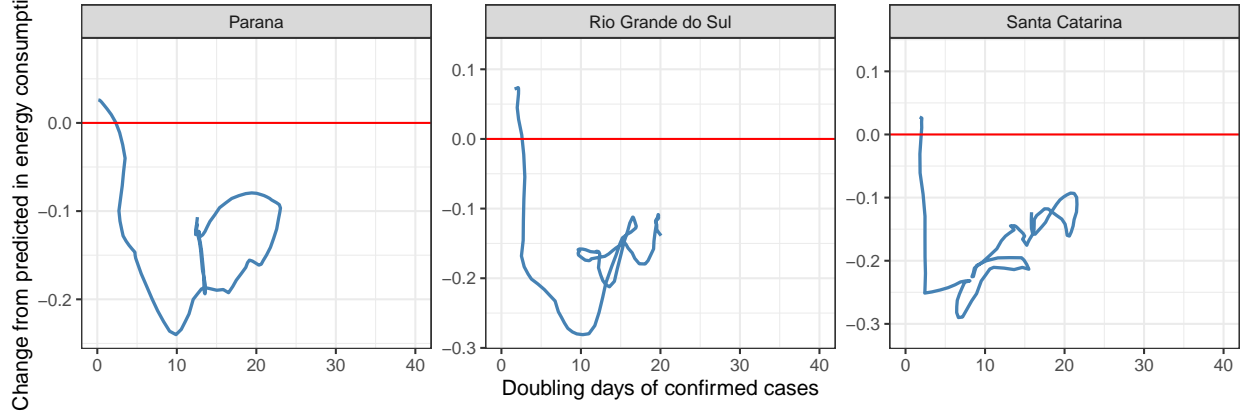
## Somente ACL



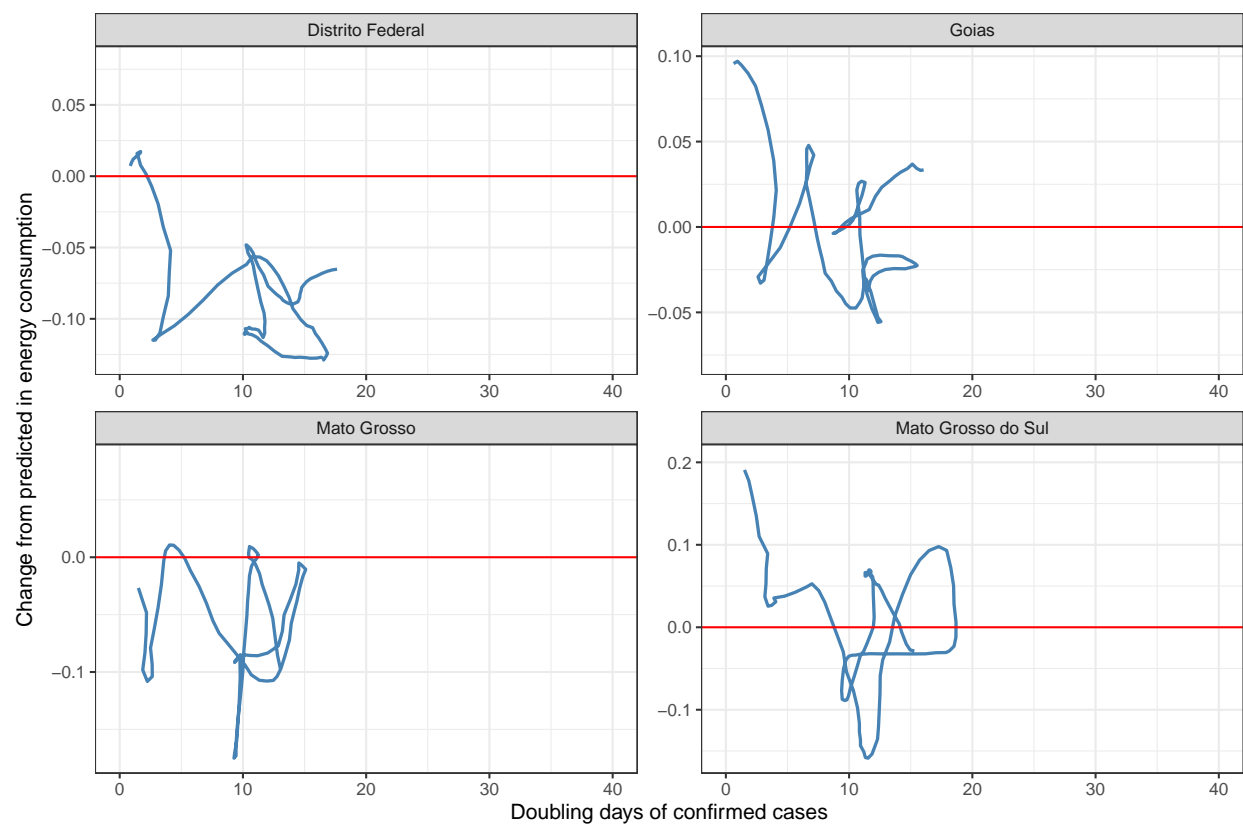
## Região Sul



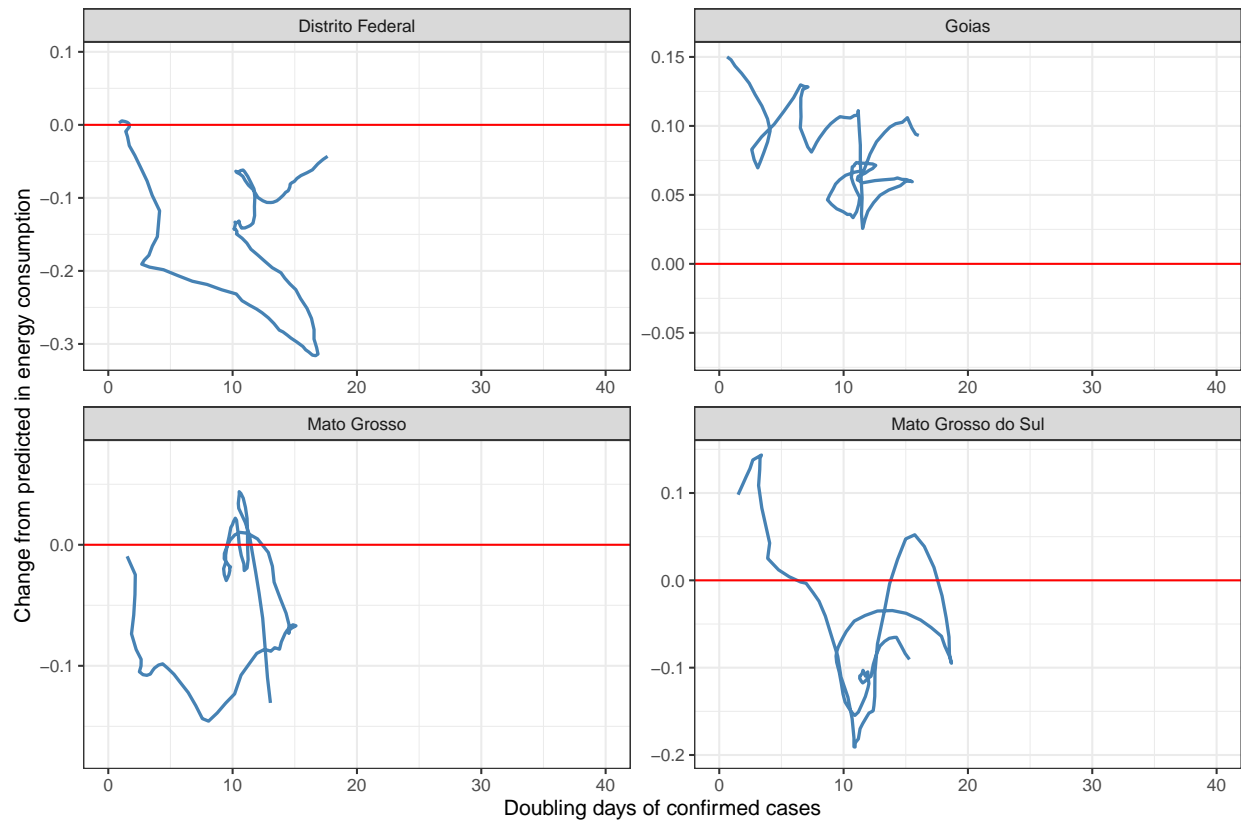
Somente ACL



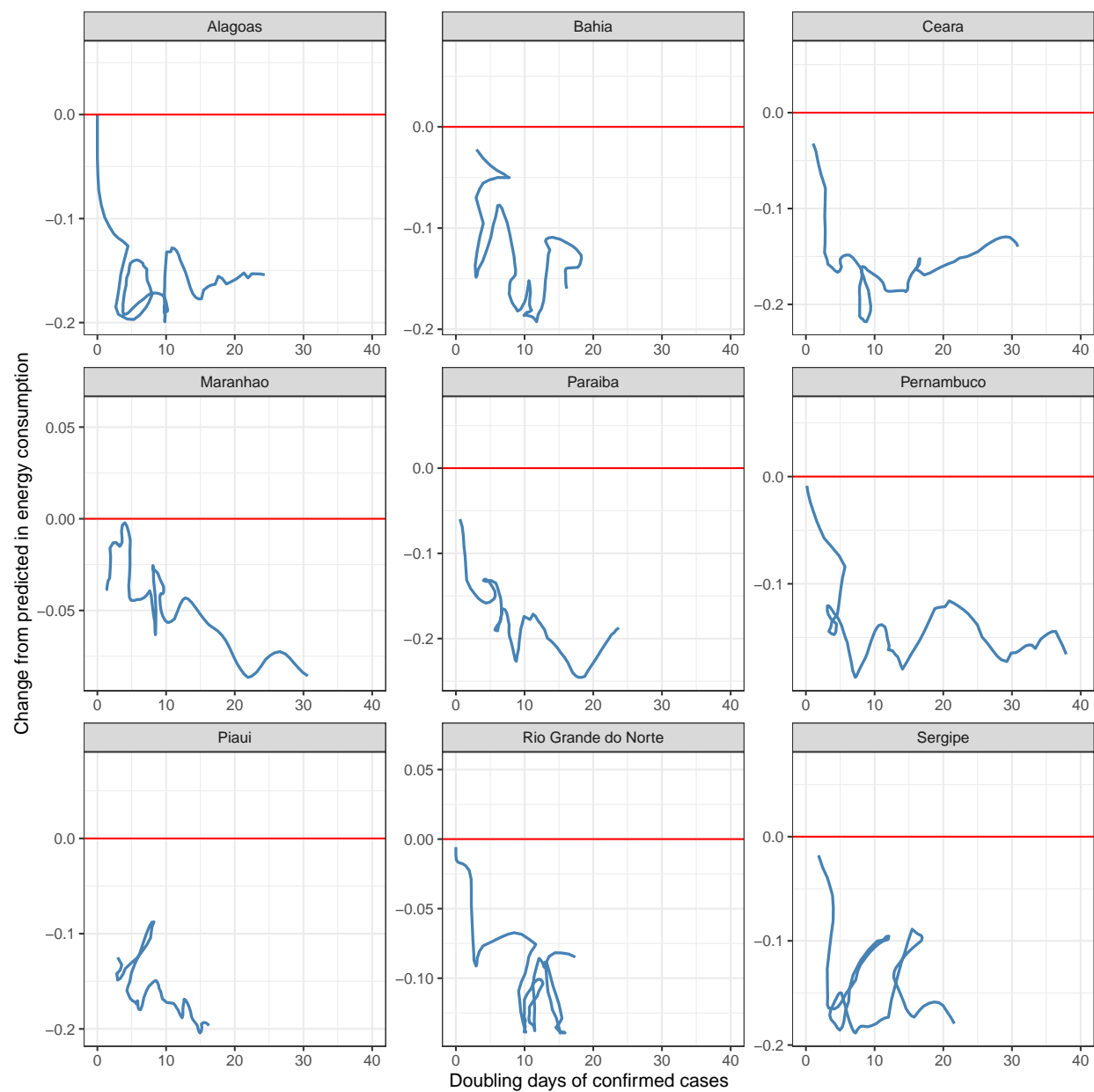
## Região Centro-Oeste



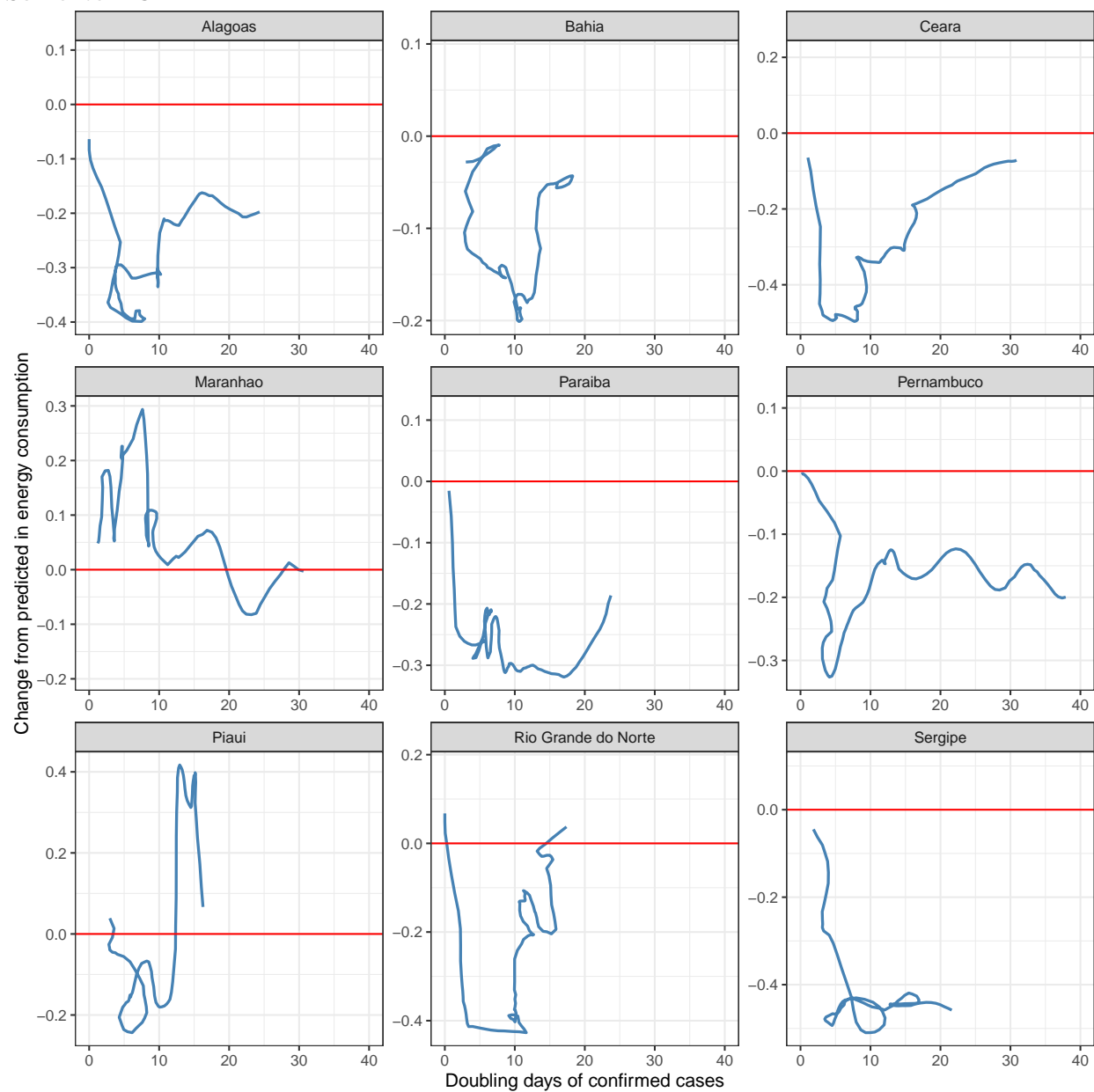
## Somente ACL



## Região Nordeste

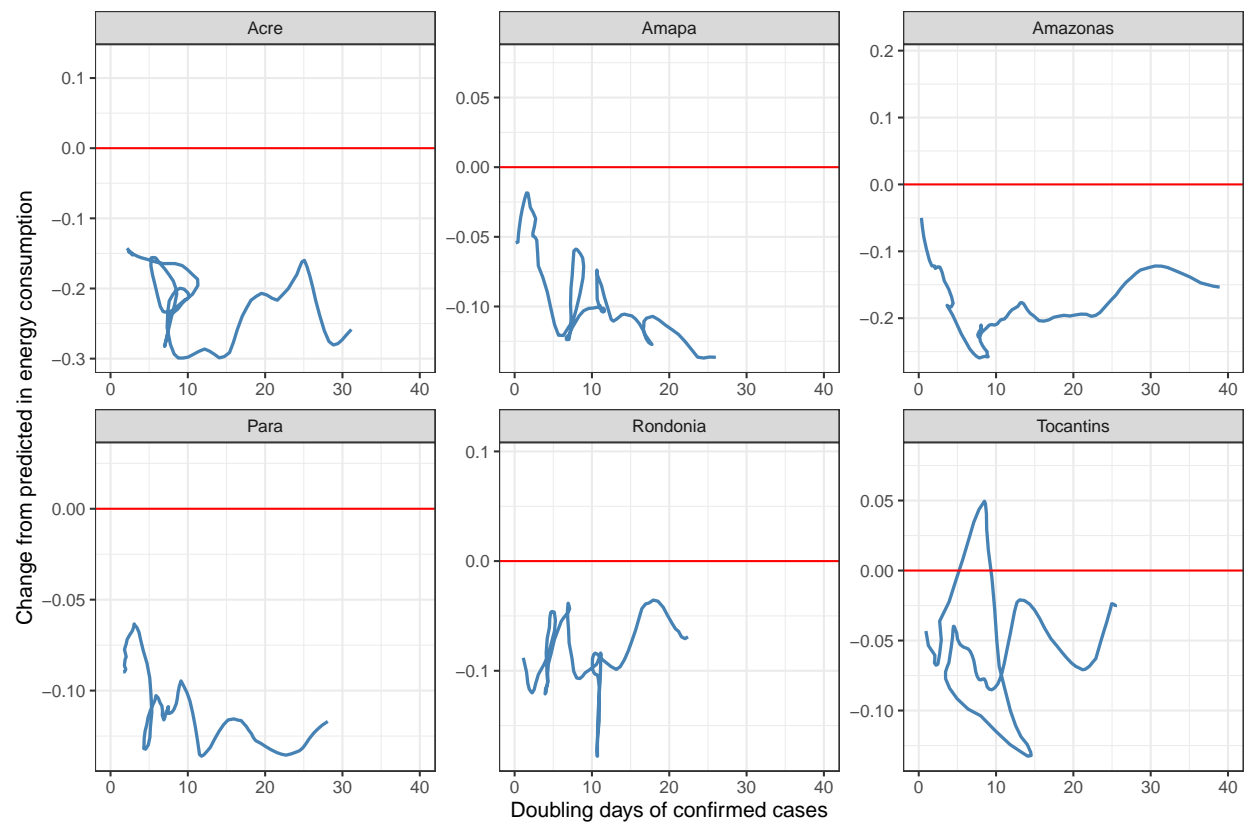


## Somente ACL

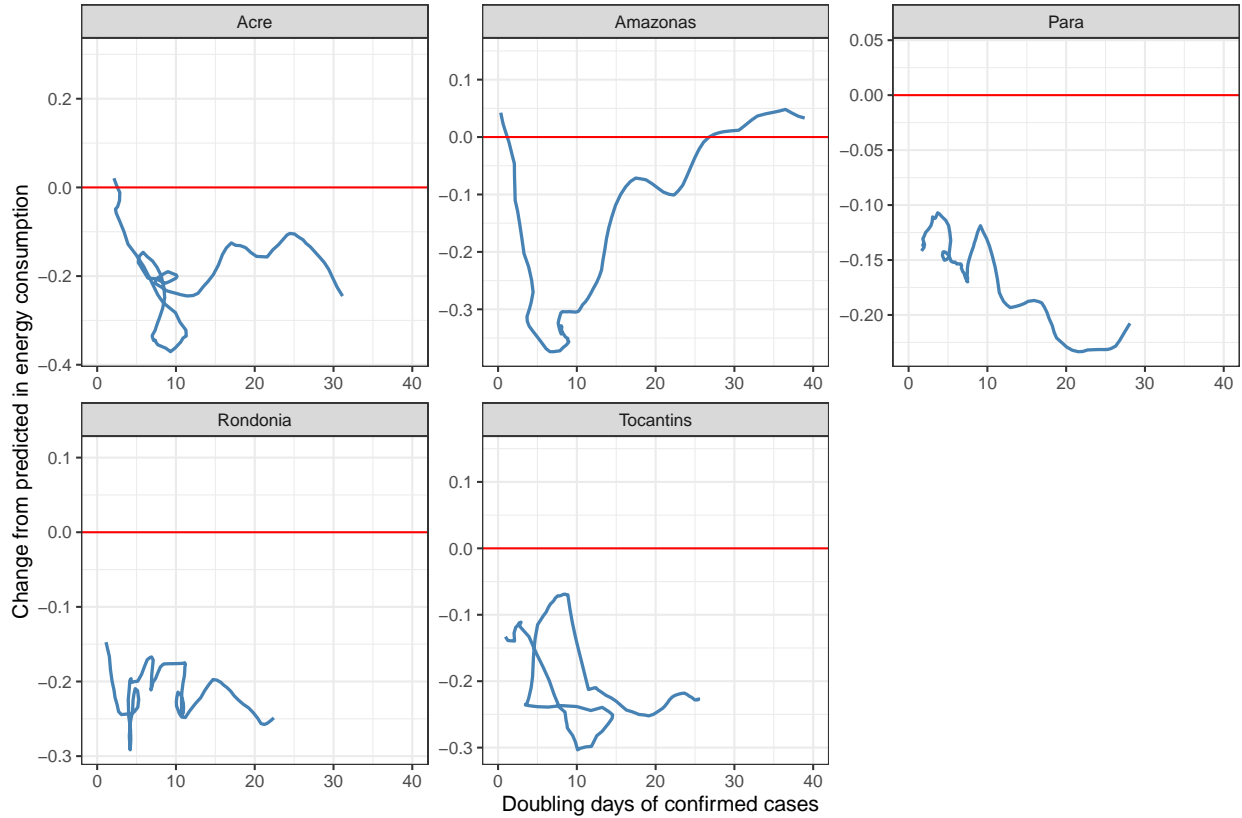




## Região Norte

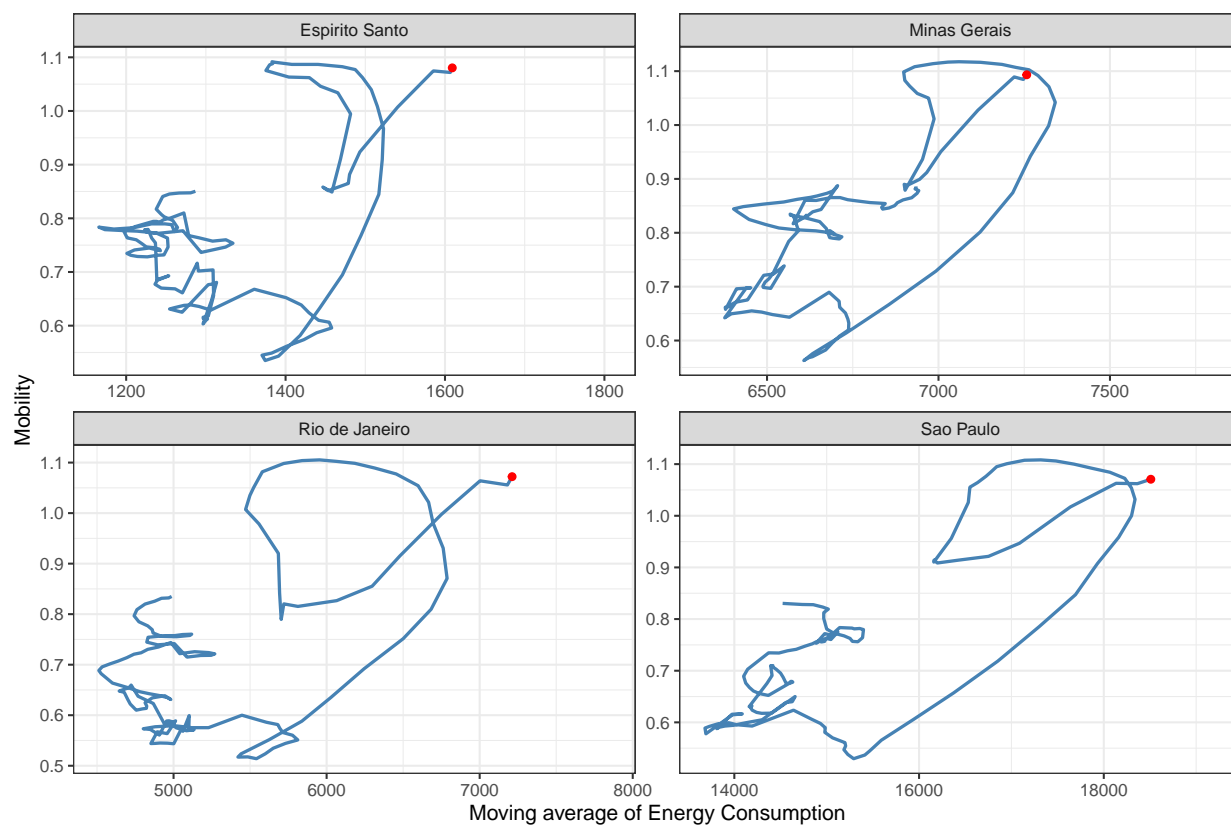


Somente ACL

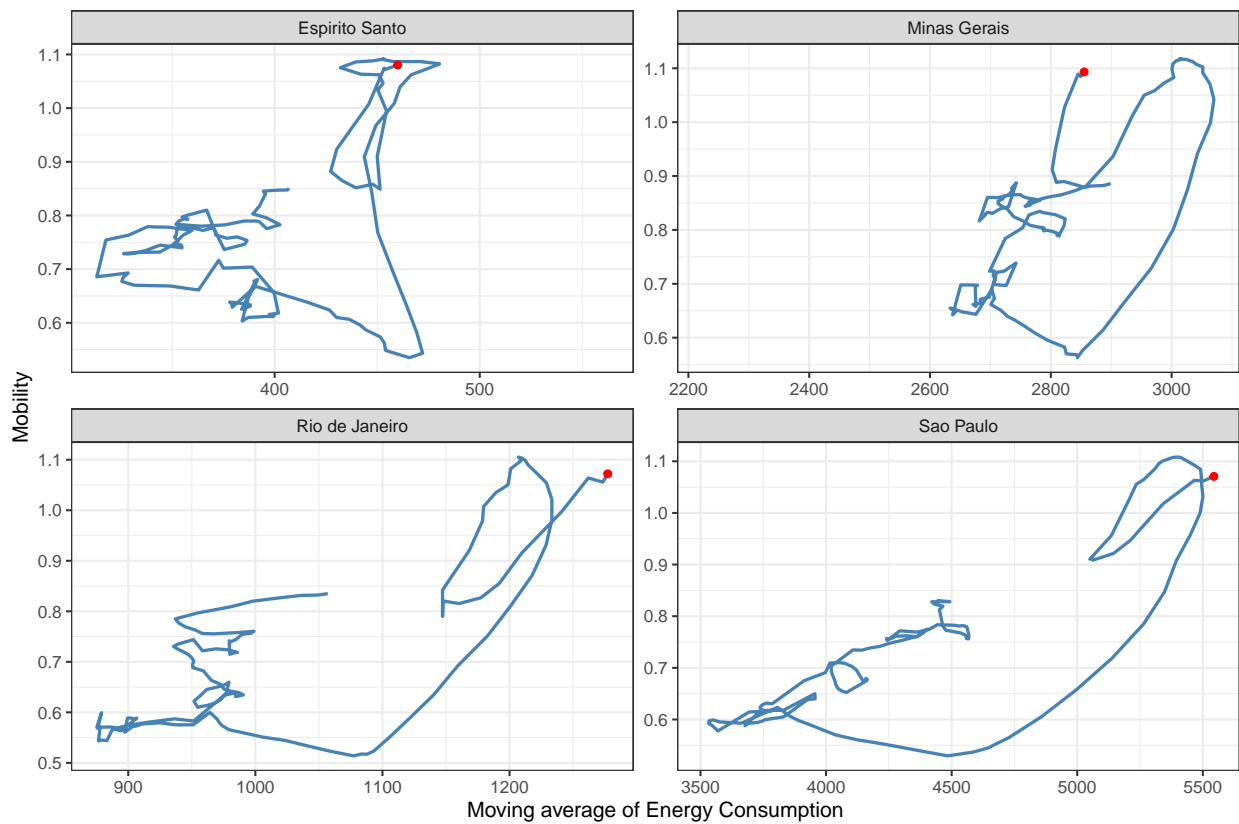


# Relação Mobilidade x Consumo de Energia

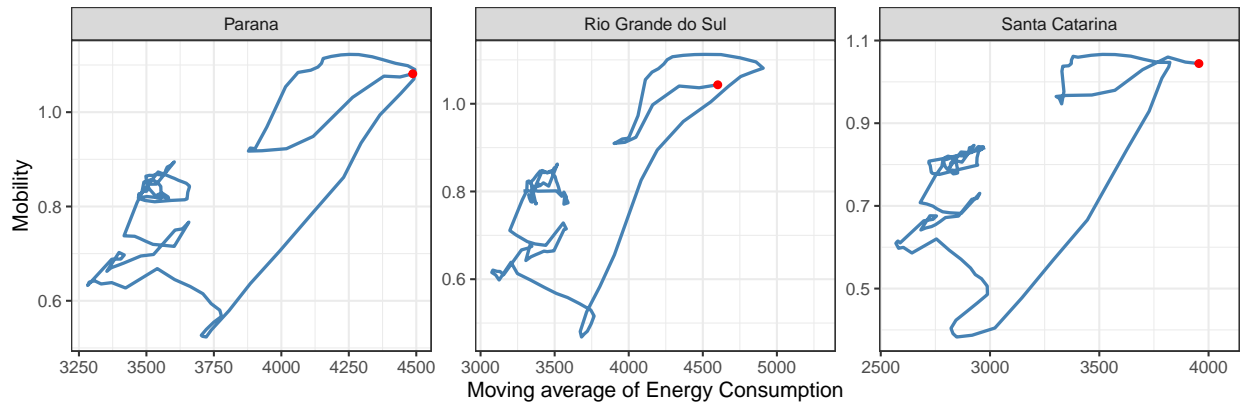
## Região Sudeste



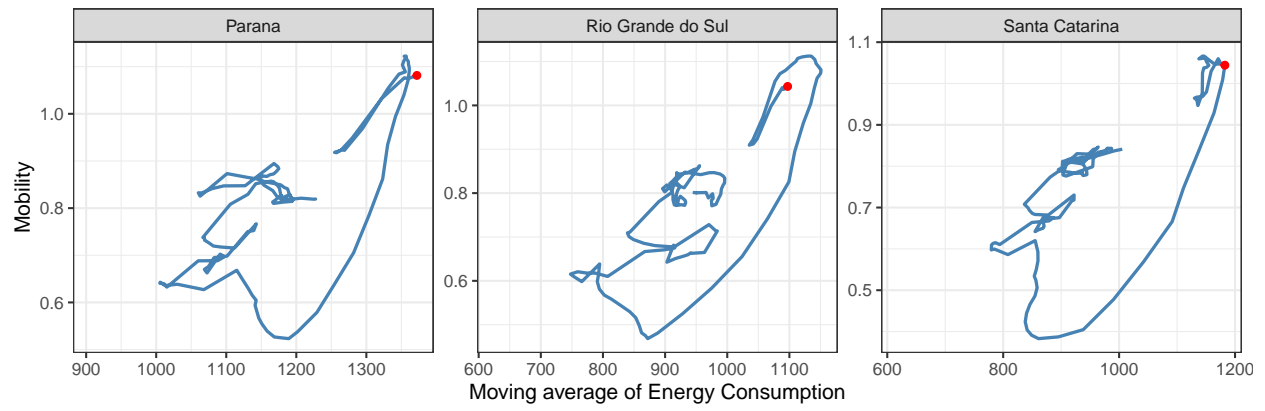
## Somente ACL



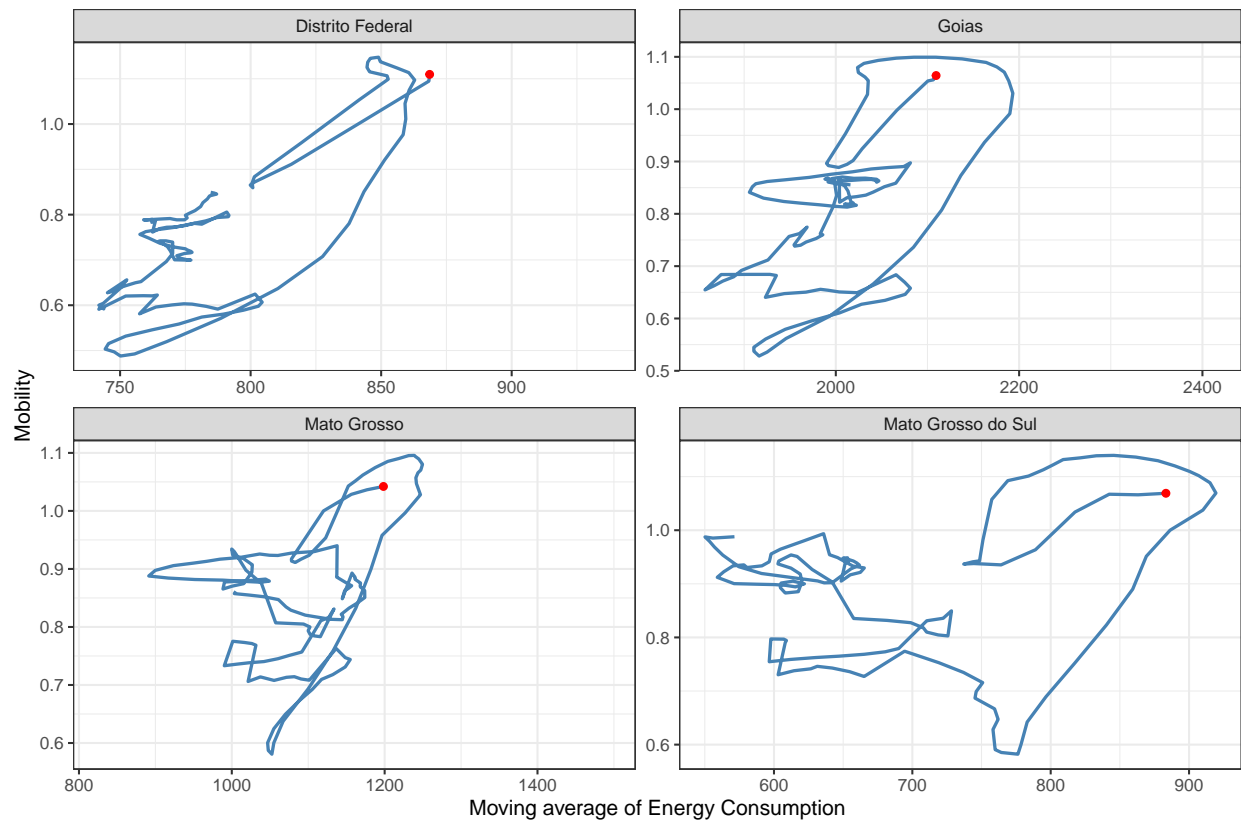
Região Sul



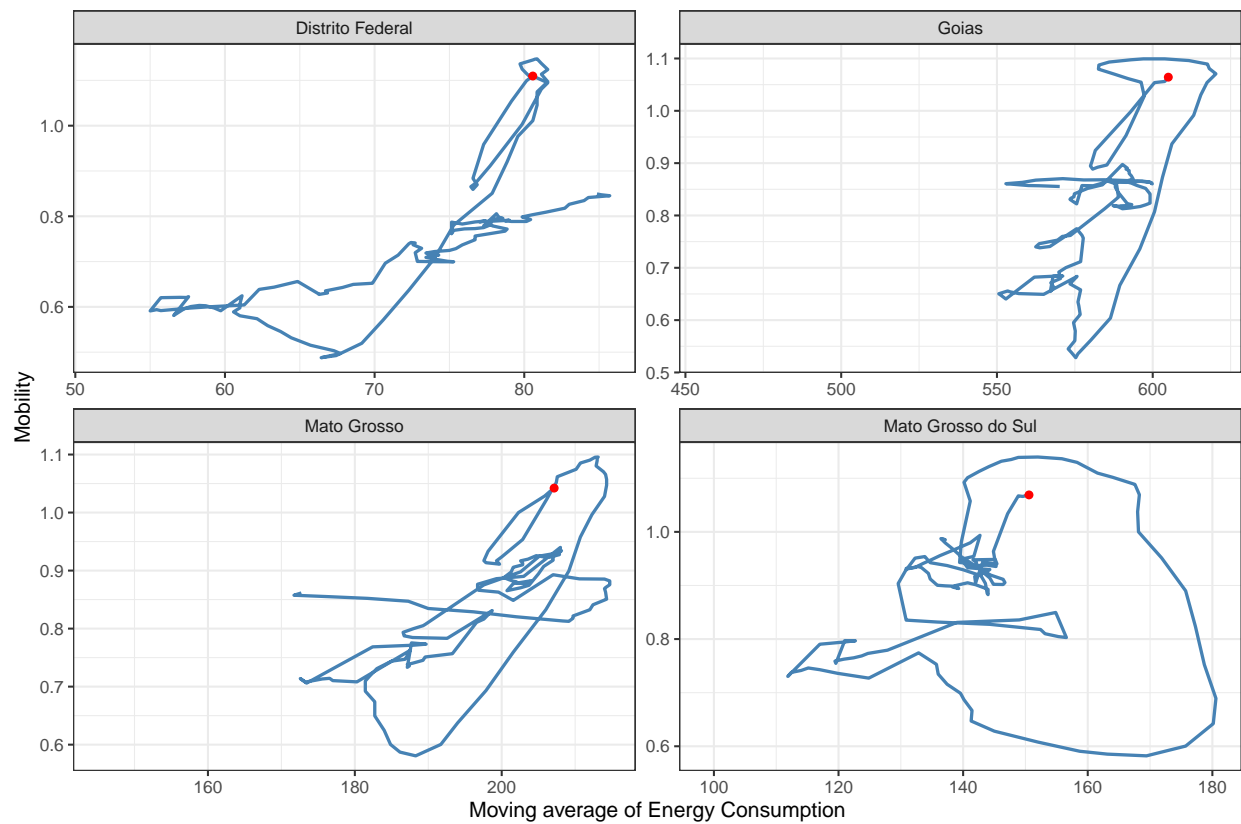
## Somente ACL



## Região Centro-Oeste

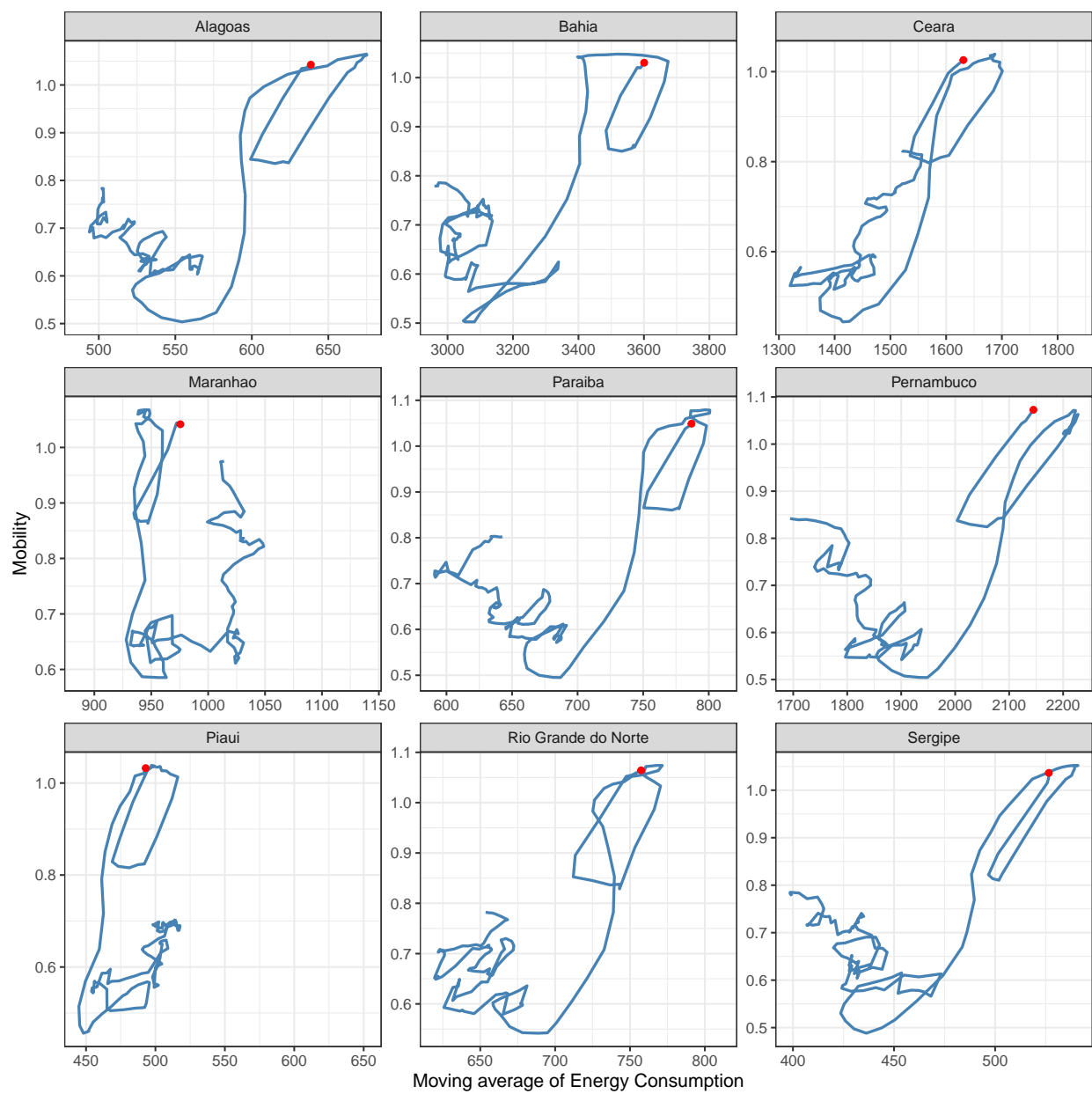


## Somente ACL

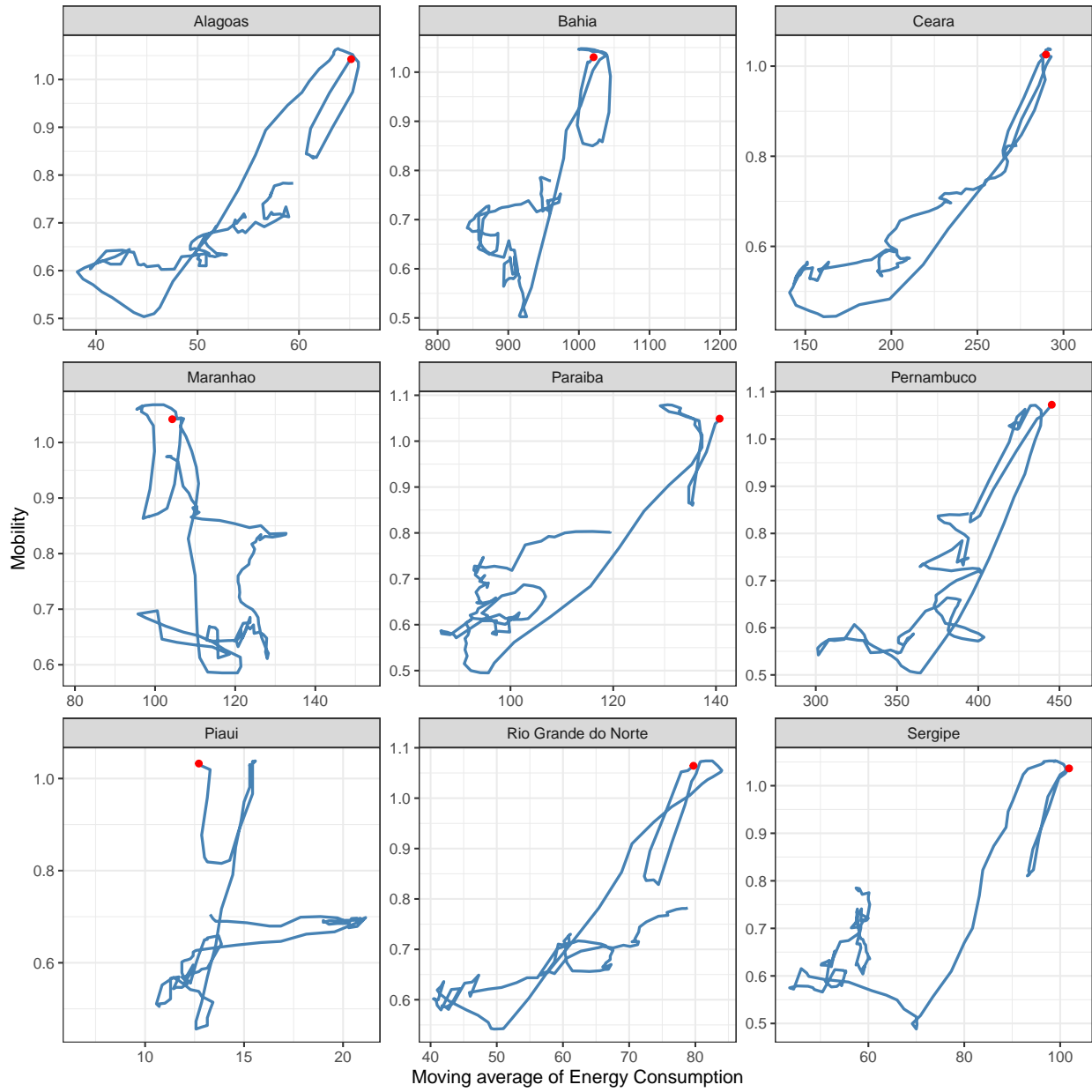




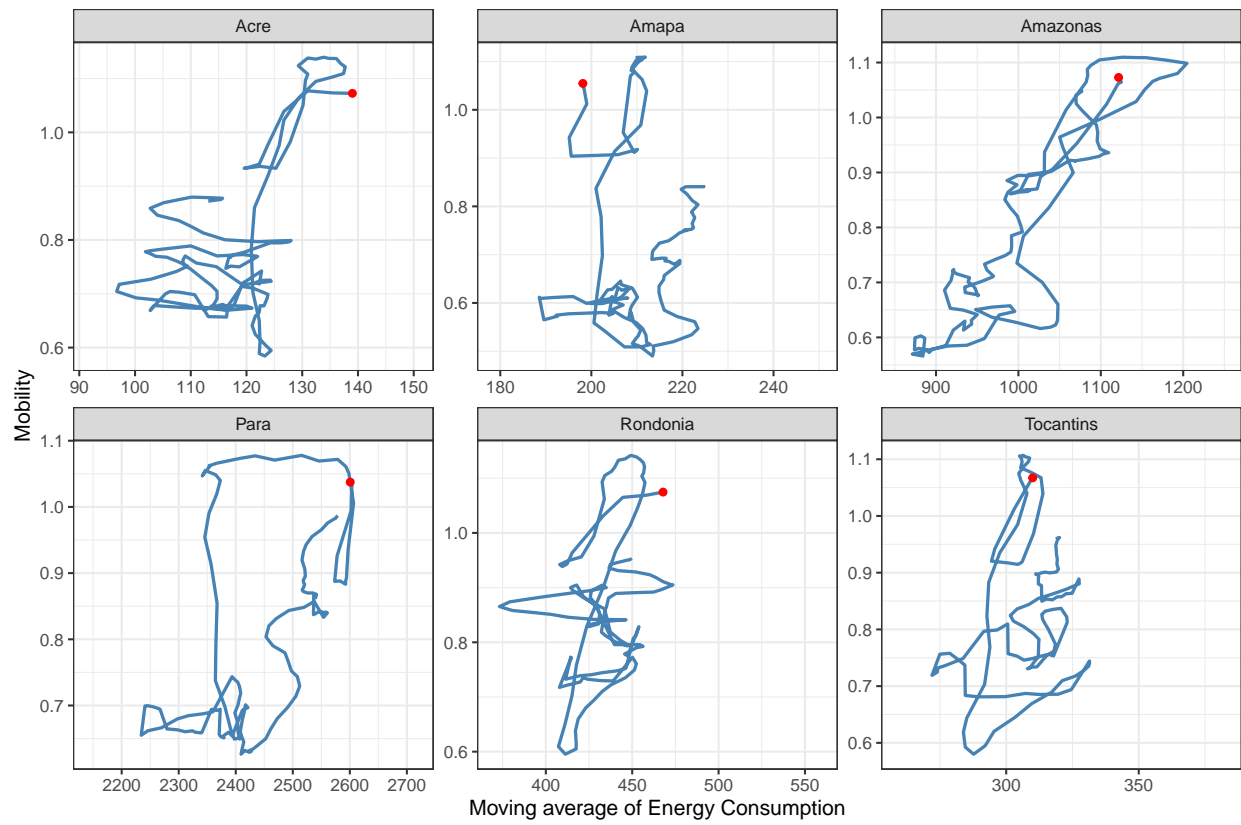
## Região Nordeste



## Somente ACL



## Região Norte



Somente ACL

