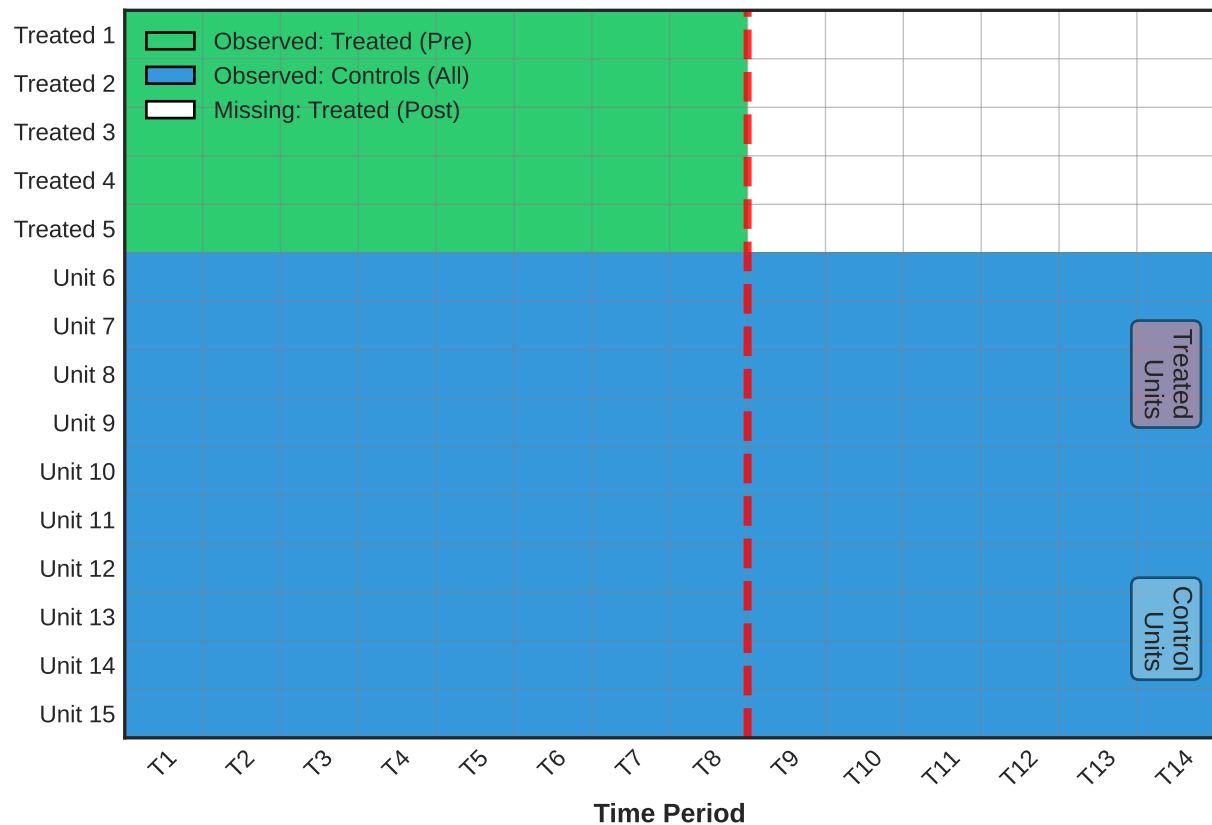
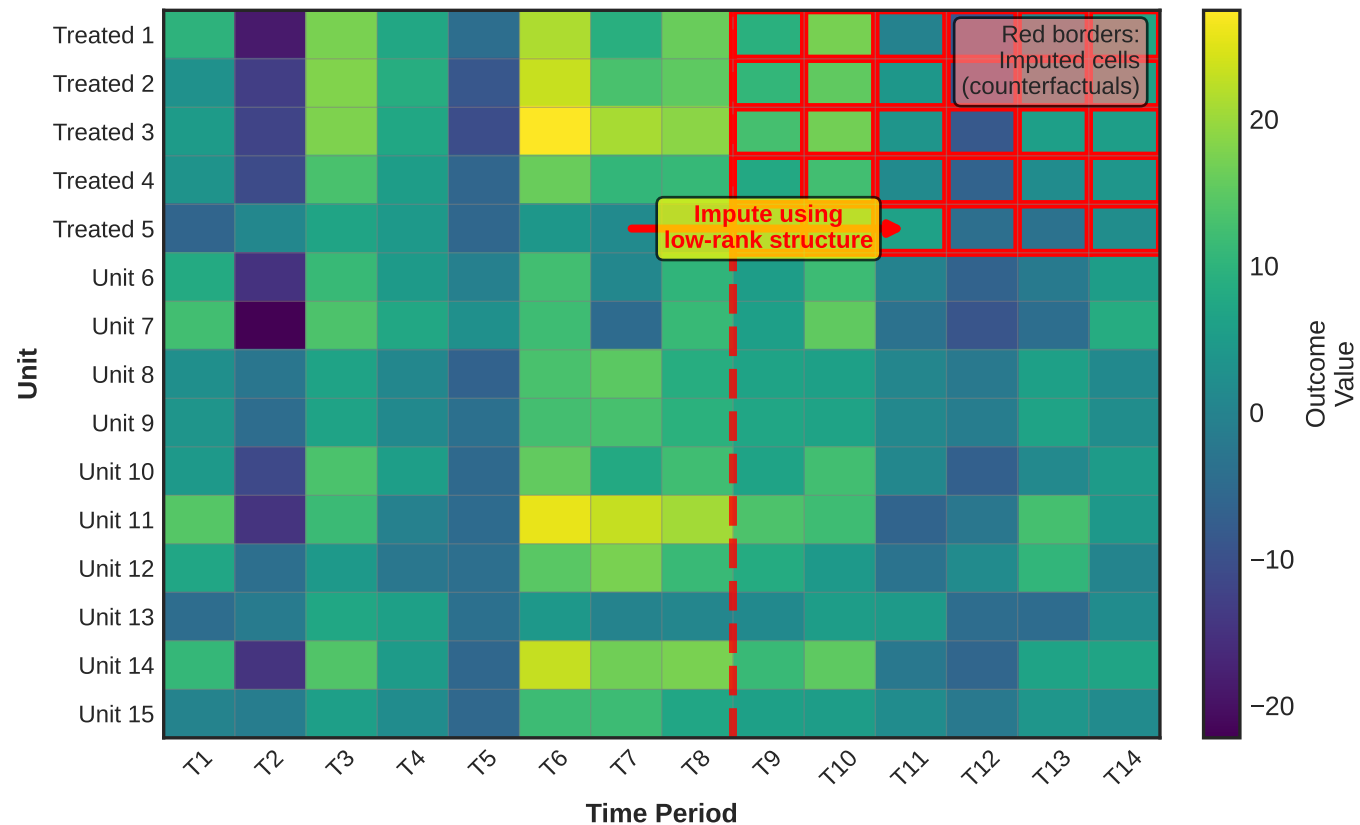


Pre-Treatment

Post-Treatment

Panel A: Matrix Completion Setup
(Observation Pattern)Pre-Treatment
(Observed)Post-Treatment
(Imputed for Treated)Panel B: Matrix Completion Result
(Imputed Counterfactuals)

Panel A shows the observation pattern. Blue cells are observed (controls in all periods, treated in pre-treatment).

White cells are missing (treated units in post-treatment). Panel B shows matrix completion results.

Red-bordered cells are imputed counterfactuals using low-rank structure estimated from observed cells.

Treatment effects = Observed outcomes (not shown) - Imputed counterfactuals (red borders).