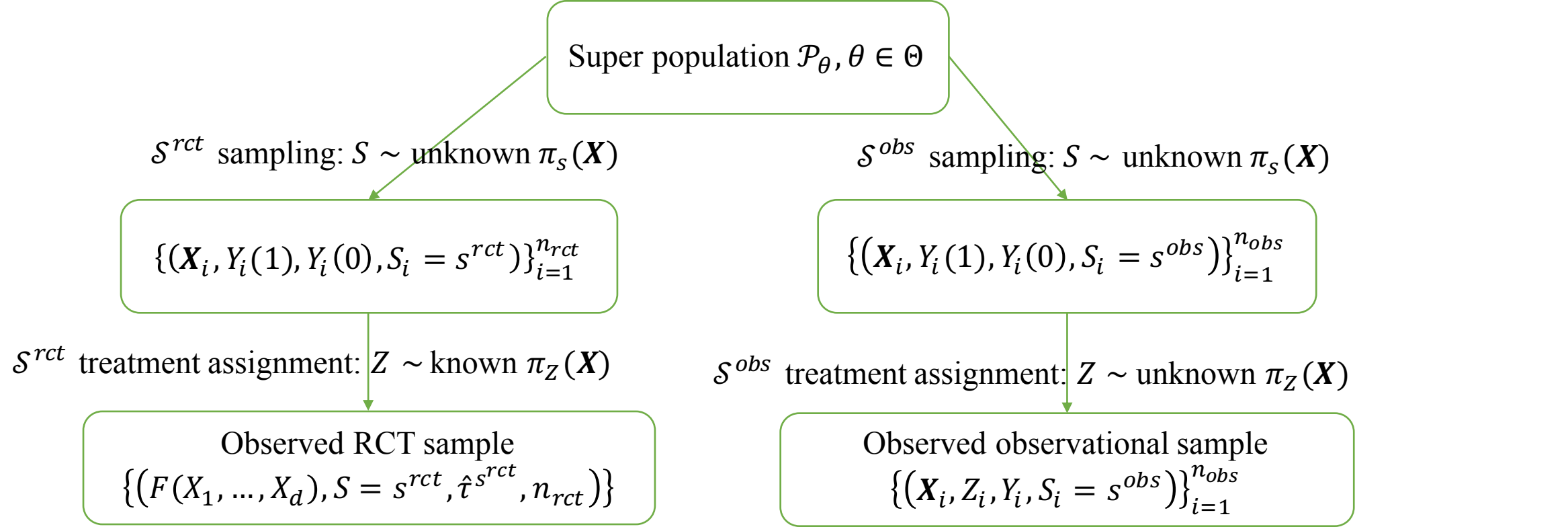
Super population $\mathcal{P}_\theta, \theta \in \Theta$
$\mathcal{S}^{rct}$ sampling: $S \sim$ unknown $\pi_s(\boldsymbol{X})$
$\mathcal{S}^{obs}$ sampling: $S \sim$ unknown $\pi_s(\boldsymbol{X})$
$\{(\boldsymbol{X}_i, Y_i(1), Y_i(0), S_i = s^{rct})\}_{i=1}^{n_{rct}}$
$\{(\boldsymbol{X}_i, Y_i(1), Y_i(0), S_i = s^{obs})\}_{i=1}^{n_{obs}}$
$\mathcal{S}^{rct}$ treatment assignment: $Z \sim$ known $\pi_Z(\boldsymbol{X})$
$\mathcal{S}^{obs}$ treatment assignment: $Z \sim$ unknown $\pi_Z(\boldsymbol{X})$
Observed RCT sample
$\{(F(X_1, \ldots, X_d), S = s^{rct}, \hat{\tau}^{s^{rct}}, n_{rct})\}$
Observed observational sample
$\{(\boldsymbol{X}_i, Z_i, Y_i, S_i = s^{obs})\}_{i=1}^{n_{obs}}$