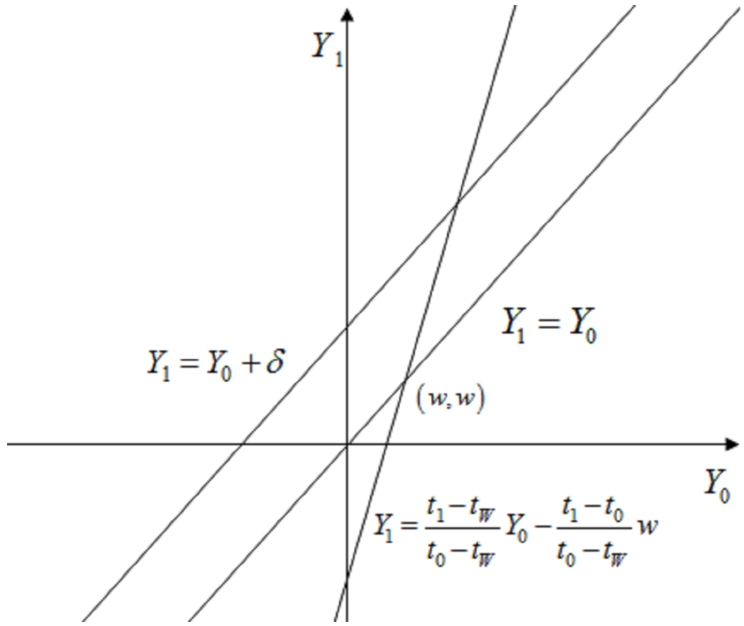

Figure 11: The DTE under concave/convex treatment response

where

$$F_{\Delta}^{L}(\delta) = \sup_{\{a_k\}_{k=-\infty}^{\infty}} \sum_{k=-\infty}^{\infty} \int \max\left\{F_{1,W}(a_{k+1}|w) - F_{0,W}(a_k|w), 0\right\} dF_W,$$

$$F_{\Delta}^{U}(\delta) = 1 + \int \inf_{\{b_k\}_{k=-\infty}^{\infty}} \sum_{k=-\infty}^{\infty} \left\{\min\left(F_{1,W}\left(\frac{1}{T_0} b_{k+1} - \frac{T_1}{T_0} w \; |w\right) - F_{0,W}(b_k \; |w)\right), 0\right\} dF_W,$$

with

$$\begin{aligned} 0 \le a_{k+1} - a_k &\le \delta, \\ T_0(b_k + \delta) + T_1 \le b_{k+1} &\le b_k, \\ \textit{where} \;\; T_1 &= \frac{t_1 - t_0}{t_1 - t_W}, \\ T_0 &= 1 - T_1. \end{aligned}$$

(ii) Under convex treatment response,

$$F_{\Delta}^{L}(\delta) = \int \sup_{\{a_k\}_{k=-\infty}^{\infty}} \sum_{k=-\infty}^{\infty} \max\left\{F_{1,W}(S_1 a_{k+1} + (1 - S_1) w|w) - F_{0,W}(a_k|w), 0\right\} dF_W,$$

$$F_{\Delta}^{U}(\delta) = 1 + \int \inf_{y \in \mathbb{R}} \left\{\min\left(F_{1,W}(y|w) - F_{0,W}(y - \delta|w)\right), 0\right\} dF_W.$$