

Ridge  $\rightarrow$

$$\rightarrow L/E + \alpha [SSC] \xrightarrow{\text{penalty term}} \downarrow$$

$$w_1^2 + w_2^2 + w_3^2 + \dots + w_n^2$$

As  $\alpha \uparrow$   $C \downarrow$   $\rightarrow 0'$

$$y = b_0 + b_1 x_1 \leftarrow \alpha = 0.01$$

$$y = b'_0 + b'_1 x_1 \leftarrow \alpha = 0.5$$

$$\cancel{b_1} > \cancel{b'_1}$$

Lasso  $\rightarrow$

$$L/E + \alpha [SAC] \downarrow$$

$$w_1 + w_2 + w_3 + \dots + w_n$$

$\alpha \uparrow$   $C \downarrow = 0'$

Elasticnet

$$L/R + \alpha_1 [SSC] + \alpha_2 [SAC]$$
$$\downarrow$$
$$\| \theta \|_1^2$$
$$\downarrow$$
$$\| w \|_1$$
$$\downarrow$$
$$\| \theta \|_1 \times$$
$$\downarrow$$
$$\| w \|_1 \times$$