$$\rho_{0} = \arg \max_{\rho, \beta_{1}} \rho 10 + (1 - \rho)(2 + 9\beta_{1})$$

$$s.t \ \rho 2 + (1 - \rho)(1 + \beta_{1}/2) \le \beta$$

$$r = 2 + 9\beta_{1}/2$$

$$c = 1 + \beta_{1}/2$$

$$r = 10$$

$$c = 2$$

$$r = 10$$

$$c = 2$$

$$r = 10$$

$$c = 1$$

$$R = 0$$

$$C = 1$$

$$R = 0$$

$$C = 1$$

$$R = 9$$

$$C = 3$$

$$R = 0$$

$$C = 3$$

$$R = 0$$

$$C = 0$$

$$R = 9$$

$$C = 2$$