

Merger simulation with linear Cournot model:

ONLY change cells B8 - B15, which are estimated demand parameters, observed pre-merger marginal costs, and anticipated efficiencies. Rest adjusts automatically.

Assumed that costs of merged firm (Firms 1 and 2) will be Firm 1's marginal costs times efficiency parameter (set $e = 1$ if no efficiencies)

$$P = 500 - 0.5Q$$

$$c1 = 100 ; c2 = 125 ; c3 = 150 ; c4 = 95$$

$$\text{Cost efficiencies: } e = 0.97 \text{ (post-merger: } c1 * e \text{)}$$

a: 500

b: 0.50

c1: 100.0

c2: 125.0

c3: 150.0

c4: 95.0

e: 0.97

Pre-merger Cournot Equilibrium					
Firm	q	s	$profits$	Q:	
1	188.0	0.31	17672.0	P:	194.00
2	138.0	0.23	9522.0	PS:	50668.0
3	88.0	0.14	3872.0	CS:	93636.0
4	198.0	0.32	19602.0	TS:	144304.0
				HHI:	2706
Post-merger Cournot Equilibrium					
Firm	q	s	$profits$	Q:	
1&2	227.0	0.39	25764.5	P:	210.50
3	121.0	0.21	7320.5	PS:	59765.5
4	231.0	0.40	26680.5	CS:	83810.3
				TS:	143575.8
				HHI:	3566
				ΔQ :	-33.0
				ΔP :	16.50
				ΔPS :	9097.5
				ΔCS :	-9825.8
				ΔTS :	-728.3
				ΔHHI :	859.9