

Table 1. Optimal Solutions to CAB dataset

$n^{(1)}$	$p^{(2)}$	$\alpha^{(3)}$	Optimal solution
10	3	0.2	491.93
		0.4	567.91
		0.8	716.98
	4	0.2	395.13
		0.4	493.79
		0.8	661.41
15	3	0.2	799.97
		0.4	905.10
		0.8	1099.51
	4	0.2	639.77
		0.4	779.71
		0.8	1026.52
20	3	0.2	724.54
		0.4	847.77
		0.8	1091.05
	4	0.2	577.62
		0.4	727.10
		0.8	1008.49
25	3	0.2	767.35
		0.4	901.70
		0.8	1158.83
	4	0.2	629.63
		0.4	787.51
		0.8	1087.66

Table 2. Optimal Solutions to TR dataset

$n^{(1)}$	$p^{(2)}$	$\alpha^{(3)}$	Optimal solution	Hubs
25	3	0.2	511.15	3, 9, 15
		0.4	597.00	3, 15, 1
		0.8	752.79	3, 15, 1
	4	0.2	403.51	3, 9, 12, 18
		0.4	515.08	3, 12, 18, 1
		0.8	705.47	3, 18, 1, 15
55	3	0.2	592.64	19, 4, 30
		0.4	684.27	4, 30, 34
		0.8	853.35	4, 30, 1
	4	0.2	501.74	4, 19, 26, 33
		0.4	618.13	4, 26, 33, 34
		0.8	812.37	4, 26, 1, 32

(1): Number of nodes;(2):Number of hubs;(3)Discount factor