

**Table S3. OI of instances with different scales**

$(L, m, n)$	OI		$(L, m, n)$	OI		$(L, m, n)$	OI	
	OI1	OI2		OI1	OI2		OI1	OI2
	(FCFS+TSA)	(NN+TSA)		(FCFS+TSA)	(NN+TSA)		(FCFS+TSA)	(NN+TSA)
(150, 2, 2)	58.56%	6.49%	(600, 2, 2)	83.87%	8.23%	(1350, 2, 2)	88.27%	8.85%
(150, 2, 3)	61.84%	11.20%	(600, 2, 3)	68.73%	10.12%	(1350, 2, 3)	76.38%	7.67%
(150, 2, 4)	57.17%	13.29%	(600, 2, 4)	65.21%	10.16%	(1350, 2, 4)	75.61%	8.19%
(150, 2, 5)	58.85%	9.41%	(600, 2, 5)	69.25%	9.39%	(1350, 2, 5)	66.79%	18.89%
(150, 3, 2)	62.96%	13.50%	(600, 3, 2)	75.58%	10.67%	(1350, 3, 2)	84.22%	8.21%
(150, 3, 3)	59.44%	8.44%	(600, 3, 3)	72.57%	10.64%	(1350, 3, 3)	76.78%	9.16%
(150, 3, 4)	55.67%	9.29%	(600, 3, 4)	67.63%	12.11%	(1350, 3, 4)	68.29%	9.14%
(150, 3, 5)	57.46%	12.14%	(600, 3, 5)	66.16%	9.20%	(1350, 3, 5)	69.93%	10.73%
(150, 4, 2)	58.28%	10.58%	(600, 4, 2)	79.67%	9.29%	(1350, 4, 2)	85.95%	13.03%
(150, 4, 3)	55.95%	15.67%	(600, 4, 3)	70.45%	11.42%	(1350, 4, 3)	73.64%	7.34%
(150, 4, 4)	57.55%	12.90%	(600, 4, 4)	68.26%	11.26%	(1350, 4, 4)	71.08%	11.63%
(150, 4, 5)	54.90%	8.58%	(600, 4, 5)	63.17%	8.84%	(1350, 4, 5)	72.20%	10.65%
(150, 5, 2)	60.50%	12.25%	(600, 5, 2)	80.21%	8.94%	(1350, 5, 2)	79.35%	8.27%
(150, 5, 3)	54.07%	9.95%	(600, 5, 3)	71.35%	9.68%	(1350, 5, 3)	74.85%	9.37%
(150, 5, 4)	55.20%	9.15%	(600, 5, 4)	64.05%	9.52%	(1350, 5, 4)	68.69%	10.62%
(150, 5, 5)	57.98%	10.21%	(600, 5, 5)	64.83%	8.10%	(1350, 5, 5)	68.90%	7.52%

\*  $OI1 = \frac{NN - FT}{NN} \times 100\%$  ,  $OI2 = \frac{NN - NT}{NN} \times 100\%$  , where  $NN$  ,  $FT$  and  $NT$  represent the average objective value of NN, FCFS+TSA and NN+TSA for the 10 instances respectively.