TSP Branch & Bound in Go

Report for execution time comparison b/w Sequential & Parallel Programs

No. of Cities (n)	Time Taken (Sequential) (A)	Time Taken (Parallel) (B)	Speedup S = A/B	Efficiency Speedup/#threads E = S/(n-1)
5	140 μs	300 μs	0.467	0.116
7	160 μs	350 μs	0.457	0.076
10	950 μs	1.3 ms	0.73	0.082
15	15 ms	9 ms	1.67	0.12
20	650 ms	140 ms	4.64	0.24
23	1.15 s	720 ms	1.59	0.072
25	8.5 s	6.6 s	1.28	0.053
30	4 min 52 sec	2 min 57 s	1.65	0.057
35	—	13 min 32 s	—	—
37	—	48 min 31 s	—	—

Note: The reported times are for a particular random matrix (for same n), the time taken may differ for a different input drastically, e.g. n=30, parallel program took just 16 sec for some input, and 55 sec for another input.

No. of threads for each case = n-1

Akshansh Chahal