Singly Constrained Gravity Model (Origin)

Input Values :

Base Year Origin-Destination Cost Matrix			
Zone	1	2	3
1	3	10	15
2	10	5	10
3	15	10	5

Future Year Origins Total			
Zone	1	2	3
	10	15	8

Future Year Destinations Total

Zone	1	2	3
	7	16	10

Selected Impedence Functions : Power Function [$F_{ij} = C_{ij}^{B}$]

B value = -2

Calculations :

Impedance Matrix Calculations (Fij)			
Zone	1	2	3
1	0.1111	0.01	0.0044
2	0.01	0.04	0.01
3	0.0044	0.01	0.04

Dij*Fij				
Zone	1	2	3	Sum Dij*Fij
1	0.7778	0.16	0.0444	0.9822
2	0.07	0.64	0.1	0.81
3	0.0311	0.16	0.4	0.5911

Interaction Probabilities (Pij)			
Zone	1	2	3
1	0.7919	0.1629	0.0452
2	0.0864	0.7901	0.1235
3	0.0526	0.2707	0.6767

Final Result

Origin Destination Matrix Tij					
Zone	1	2	3	Sum Dj*Fij	Future year Origins Total
1	7.9186	1.629	0.4525	10	10
2	1.2963	11.8519	1.8519	15	15
3	0.4211	2.1654	5.4135	8	8