

E.4 Scenario 4 Output Results

Time	"Aged Base Data 4 (AD4)"	"base contracts 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contracts 4 (dC4)"
1	0	259.2	101.0506	0	0	0	267.3825	99.6832	516.2125	269.57	518.4	130.6957
2	0	259.2	200.7338	0	0	0	267.3825	99.6832	516.2125			117.2433
3	0	259.2	300.417	0	0	0	267.3825	99.6832	516.2125			85.10535
4	0	259.2	400.1002	0	0	0	267.3825	99.6832	516.2125			56.0936
5	0	259.2	499.7834	0	0	0	267.3825	99.6832	516.2125			35.30423
6	0	259.2	599.4666	0	0	0	267.3825	99.6832	516.2125			21.698
7	0	259.2	699.1498	0	0	0	267.3825	99.6832	516.2125			13.16425
8	0	259.2	798.833	0	0	0	267.3825	99.6832	516.2125			7.928772
9	0	259.2	898.5162	0	0	0	267.3825	99.6832	516.2125			4.755371
10	0	259.2	998.1995	0	0	0	267.3825	99.6832	516.2125			2.845062
11	0	259.2	1097.883	0	0	0	267.3825	99.6832	516.2125			1.699707
12	0	259.2	1197.566	0	0	0	267.3825	99.6832	516.2125			1.014618
13	0	259.2	1297.249	0	0	0	267.3825	99.6832	516.2125			0.605347
14	0	259.2	1396.932	0	0	0	267.3825	99.6832	516.2125			0.361053
15	0	259.2	1496.616	0	0	0	267.3825	99.6832	516.2125			0.215271
16	0	259.2	1596.299	0	0	0	267.3825	99.6832	516.2125			0.128357
17	0	259.2	1695.982	0	0	0	267.3825	99.6832	516.2125			0.076538
18	0	259.2	1795.665	0	0	0	267.3825	99.6832	516.2125			0.045593
19	0	259.2	1895.349	0	0	0	267.3825	99.6832	516.2125			0.027191
20	0	259.2	1995.032	0	0	0	267.3825	99.6832	516.2125			0.016235
21	0	259.2	2094.715	0	0	0	267.3825	99.6832	516.2125			0.009705
22	0	259.2	2194.398	0	0	0	267.3825	99.6832	516.2125			0.005768
23	0	259.2	2294.081	0	0	0	267.3825	99.6832	516.2125			0.003418
24	0	259.2	2393.764	0	0	0	267.3825	99.6832	516.2125			0.002075
25	0	259.2	2493.447	0	0	0	267.3825	99.6832	516.2125			0.00119
26	0	259.2	2593.13	0	0	0	267.3825	99.6832	516.2125			0.000702
27	0	259.2	2692.813	0	0	0	267.3825	99.6832	516.2125			0.000458
28	0	259.2	2792.497	0	0	0	267.3825	99.6832	516.2125			0.000214
29	0	259.2	2892.18	0	0	0	267.3825	99.6832	516.2125			0.000153
30	0	259.2	2991.863	0	0	0	267.3825	99.6832	516.2125			0.000122

E.4 Scenario 4 Output Results

Time	"Aged Base Data 4 (AD4)"	"base contracts 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contracts 4 (dC4)"
31	0	259.2	3091.546	0	0	0	267.3825	99.6832	516.2125			3.05E-05
32	0	259.2	3191.229	0	0	0	267.3825	99.6832	516.2125			3.05E-05
33	0	259.2	3290.912	0	0	0	267.3825	99.6832	516.2125			3.05E-05
34	0	259.2	3390.595	0	0	0	267.3825	99.6832	516.2125			3.05E-05
35	0	259.2	3490.278	0	0	0	267.3825	99.6832	516.2125			3.05E-05
36	0	259.2	3589.961	33.02765	0	0	267.3825	99.6832	516.2125			3.05E-05
37	33.02765	259.2	3656.617	33.64088	0	0	267.3825	99.6832	516.2125			91.8522
38	66.66852	259.2	3722.659	34.24847	0	0	267.3825	99.6832	516.2125			45.92609
39	100.917	259.2	3788.094	34.85046	0	0	267.3825	99.6832	516.2125			22.9631
40	135.7675	259.2	3852.927	35.44693	0	0	267.3825	99.6832	516.2125			11.48154
41	171.2144	259.2	3917.163	36.0379	0	0	267.3825	99.6832	516.2125			5.740753
42	207.2523	259.2	3980.808	36.62344	0	0	267.3825	99.6832	516.2125			2.870422
43	243.8757	259.2	4043.868	37.20359	0	0	267.3825	99.6832	516.2125			1.435181
44	281.0793	259.2	4106.348	37.7784	0	0	267.3825	99.6832	516.2125			0.717621
45	318.8577	259.2	4168.252	38.34792	0	0	267.3825	99.6832	516.2125			0.358826
46	357.2057	259.2	4229.588	38.91221	0	0	267.3825	99.6832	516.2125			0.179352
47	396.1179	259.2	4290.359	39.4713	0	0	267.3825	99.6832	516.2125			0.089691
48	435.5892	259.2	4350.571	40.02525	0	0	267.3825	99.6832	516.2125			0.04483
49	475.6144	259.2	4410.229	40.5741	0	0	267.3825	99.6832	516.2125			0.02243
50	516.1885	259.2	4469.337	41.1179	0	0	267.3825	99.6832	516.2125			0.0112
51	557.3065	259.2	4527.903	41.65671	0	0	267.3825	99.6832	516.2125			0.005585
52	598.9631	259.2	4585.929	42.19055	0	0	267.3825	99.6832	516.2125			0.002777
53	641.1537	259.2	4643.422	42.71948	0	0	267.3825	99.6832	516.2125			0.001343
54	683.8732	259.2	4700.386	43.24355	0	0	267.3825	99.6832	516.2125			0.000671
55	727.1167	259.2	4756.825	43.76279	0	0	267.3825	99.6832	516.2125			0.000397
56	770.8795	259.2	4812.746	44.27726	0	0	267.3825	99.6832	516.2125			0.000153
57	815.1568	259.2	4868.151	44.78699	0	0	267.3825	99.6832	516.2125			9.16E-05
58	859.9438	259.2	4923.047	45.29204	0	0	267.3825	99.6832	516.2125			6.1E-05
59	905.2358	259.2	4977.438	45.79243	0	0	267.3825	99.6832	516.2125			0
60	951.0283	259.2	5031.329	46.28823	0	0	267.3825	99.6832	516.2125			0

E.4 Scenario 4 Output Results

Time	"Aged Base Data 4 (AD4)"	"base contracts 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contracts 4 (dC4)"
61	997.3165	259.2	5084.724	46.77946	0	0	267.3825	99.6832	516.2125			0
62	1044.096	259.2	5137.628	47.26618	0	0	267.3825	99.6832	516.2125			0
63	1091.362	259.2	5190.045	47.74841	0	0	267.3825	99.6832	516.2125			0
64	1139.111	259.2	5241.979	48.22621	0	0	267.3825	99.6832	516.2125			0
65	1187.337	259.2	5293.437	48.69962	0	0	267.3825	99.6832	516.2125			0
66	1236.036	259.2	5344.42	49.16866	0	0	267.3825	99.6832	516.2125			0
67	1285.205	259.2	5394.935	49.6334	0	0	267.3825	99.6832	516.2125			0
68	1334.839	259.2	5444.984	50.09386	0	0	267.3825	99.6832	516.2125			0
69	1384.932	259.2	5494.574	50.55008	0	0	267.3825	99.6832	516.2125			0
70	1435.482	259.2	5543.707	51.00211	0	0	267.3825	99.6832	516.2125			0
71	1486.484	259.2	5592.388	51.44997	0	0	267.3825	99.6832	516.2125			0
72	1537.934	259.2	5640.622	51.89372	31.58748	0	267.3825	99.6832	516.2125			0
73	1621.416	259.2	5656.824	52.04278	31.67821	0	267.3825	99.6832	516.2125			0
74	1705.137	259.2	5672.786	52.18963	31.7676	0	267.3825	99.6832	516.2125			0
75	1789.094	259.2	5688.512	52.33431	31.85567	0	267.3825	99.6832	516.2125			0
76	1873.284	259.2	5704.005	52.47685	31.94243	0	267.3825	99.6832	516.2125			0
77	1957.703	259.2	5719.27	52.61728	32.02791	0	267.3825	99.6832	516.2125			0
78	2042.348	259.2	5734.308	52.75563	32.11212	0	267.3825	99.6832	516.2125			0
79	2127.216	259.2	5749.123	52.89193	32.19509	0	267.3825	99.6832	516.2125			0
80	2212.303	259.2	5763.719	53.02622	32.27682	0	267.3825	99.6832	516.2125			0
81	2297.606	259.2	5778.1	53.15852	32.35736	0	267.3825	99.6832	516.2125			0
82	2383.122	259.2	5792.267	53.28886	32.4367	0	267.3825	99.6832	516.2125			0
83	2468.847	259.2	5806.225	53.41727	32.51486	0	267.3825	99.6832	516.2125			0
84	2554.78	259.2	5819.976	53.54378	32.59186	0	267.3825	99.6832	516.2125			0
85	2640.915	259.2	5833.523	53.66841	32.66773	0	267.3825	99.6832	516.2125			0
86	2727.251	259.2	5846.87	53.79121	32.74247	0	267.3825	99.6832	516.2125			0
87	2813.785	259.2	5860.02	53.91218	32.81611	0	267.3825	99.6832	516.2125			0
88	2900.513	259.2	5872.975	54.03137	32.88866	0	267.3825	99.6832	516.2125			0
89	2987.433	259.2	5885.738	54.14879	32.96013	0	267.3825	99.6832	516.2125			0
90	3074.542	259.2	5898.312	54.26447	33.03054	0	267.3825	99.6832	516.2125			0

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Time	"Aged Base Data 4 (AD4)"	"base contracts 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contracts 4 (dC4)"
91	3161.837	259.2	5910.7	54.37844	33.09992	0	267.3825	99.6832	516.2125			0
92	3249.315	259.2	5922.905	54.49073	33.16827	0	267.3825	99.6832	516.2125			0
93	3336.974	259.2	5934.93	54.60135	33.2356	0	267.3825	99.6832	516.2125			0
94	3424.811	259.2	5946.776	54.71034	33.30194	0	267.3825	99.6832	516.2125			0
95	3512.823	259.2	5958.447	54.81771	33.3673	0	267.3825	99.6832	516.2125			0
96	3601.009	259.2	5969.945	54.92349	33.43169	0	267.3825	99.6832	516.2125			0
97	3689.364	259.2	5981.273	55.02771	33.49513	0	267.3825	99.6832	516.2125			0
98	3777.887	259.2	5992.433	55.13039	33.55762	0	267.3825	99.6832	516.2125			0
99	3866.575	259.2	6003.428	55.23154	33.6192	0	267.3825	99.6832	516.2125			0
100	3955.426	259.2	6014.261	55.3312	33.67986	0	267.3825	99.6832	516.2125			0
101	4044.437	259.2	6024.933	55.42939	33.73962	0	267.3825	99.6832	516.2125			0
102	4133.605	259.2	6035.447	55.52612	33.7985	0	267.3825	99.6832	516.2125			0
103	4222.93	259.2	6045.806	55.62141	33.85651	0	267.3825	99.6832	516.2125			0
104	4312.408	259.2	6056.011	55.7153	33.91366	0	267.3825	99.6832	516.2125			0
105	4402.037	259.2	6066.065	55.8078	33.96996	0	267.3825	99.6832	516.2125			0
106	4491.815	259.2	6075.97	55.89893	34.02543	0	267.3825	99.6832	516.2125			0
107	4581.739	259.2	6085.729	55.98871	34.08008	0	267.3825	99.6832	516.2125			0
108	4671.808	259.2	6095.343	56.07716	34.13392	17.06696	267.3825	99.6832	516.2125			0
109	4779.086	259.2	6087.749	56.00729	34.09139	17.04569	267.3825	99.6832	516.2125			0
110	4886.23	259.2	6080.288	55.93865	34.04961	17.02481	267.3825	99.6832	516.2125			0
111	4993.244	259.2	6072.958	55.87121	34.00856	17.00428	267.3825	99.6832	516.2125			0
112	5100.128	259.2	6065.757	55.80497	33.96824	16.98412	267.3825	99.6832	516.2125			0
113	5206.885	259.2	6058.683	55.73988	33.92862	16.96431	267.3825	99.6832	516.2125			0
114	5313.518	259.2	6051.733	55.67595	33.8897	16.94485	267.3825	99.6832	516.2125			0
115	5420.028	259.2	6044.906	55.61313	33.85147	16.92574	267.3825	99.6832	516.2125			0
116	5526.418	259.2	6038.199	55.55143	33.81391	16.90696	267.3825	99.6832	516.2125			0
117	5632.691	259.2	6031.61	55.49081	33.77702	16.88851	267.3825	99.6832	516.2125			0
118	5738.847	259.2	6025.137	55.43126	33.74076	16.87038	267.3825	99.6832	516.2125			0
119	5844.89	259.2	6018.777	55.37275	33.70515	16.85258	267.3825	99.6832	516.2125			0
120	5950.82	259.2	6012.53	55.31528	33.67017	16.83508	267.3825	99.6832	516.2125			0

E.4 Scenario 4 Output Results

Time	"Aged Base Data 4 (AD4)"	"base contracts 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contracts 4 (dC4)"
121	6056.641	259.2	6006.393	55.25882	33.6358	16.8179	267.3825	99.6832	516.2125			0
122	6162.353	259.2	6000.364	55.20335	33.60204	16.80102	267.3825	99.6832	516.2125			0
123	6267.959	259.2	5994.44	55.14885	33.56887	16.78443	267.3825	99.6832	516.2125			-361.257
124	6373.461	0	5988.622	55.09532	33.53628	16.76814	2.1875	0.35	2.1875			-172.202
125	6478.861	0	5883.572	54.12886	32.948	16.474	2.1875	0.35	2.1875			-86.8765
126	6582.412	0	5780.371	53.17942	32.37008	16.18504	2.1875	0.35	2.1875			-36.0126
127	6684.146	0	5678.986	52.24667	31.80232	15.90116	2.1875	0.35	2.1875			-13.9201
128	6784.097	0	5579.386	51.33035	31.24456	15.62228	2.1875	0.35	2.1875			-4.43024
129	6882.294	0	5481.539	50.43016	30.69662	15.34831	2.1875	0.35	2.1875			-0.35371
130	6978.769	0	5385.414	49.54581	30.15832	15.07916	2.1875	0.35	2.1875			1.213547
131	7073.552	0	5290.981	48.67702	29.62949	14.81475	2.1875	0.35	2.1875			1.589554
132	7166.673	0	5198.209	47.82353	29.10997	14.55499	2.1875	0.35	2.1875			1.43985
133	7258.162	0	5107.071	46.98505	28.5996	14.2998	2.1875	0.35	2.1875			1.110596
134	7348.046	0	5017.536	46.16133	28.0982	14.0491	2.1875	0.35	2.1875			0.771507
135	7436.354	0	4929.578	45.35212	27.60563	13.80282	2.1875	0.35	2.1875			0.492355
136	7523.115	0	4843.167	44.55714	27.12173	13.56087	2.1875	0.35	2.1875			0.289787
137	7608.355	0	4758.277	43.77615	26.64635	13.32318	2.1875	0.35	2.1875			0.155807
138	7692.101	0	4674.882	43.00891	26.17934	13.08967	2.1875	0.35	2.1875			0.074173
139	7774.378	0	4592.954	42.25518	25.72054	12.86027	2.1875	0.35	2.1875			0.028481
140	7855.214	0	4512.468	41.51471	25.26982	12.63491	2.1875	0.35	2.1875			0.00544
141	7934.634	0	4433.399	40.78727	24.82703	12.41352	2.1875	0.35	2.1875			-0.00443
142	8012.662	0	4355.721	40.07264	24.39204	12.19602	2.1875	0.35	2.1875			-0.00735
143	8089.322	0	4279.411	39.37058	23.9647	11.98235	2.1875	0.35	2.1875			-0.00703
144	8164.64	0	4204.443	38.68087	23.54488	11.77244	2.1875	0.35	2.1875			-0.00555
145	8238.638	0	4130.795	38.00331	23.13245	11.56623	2.1875	0.35	2.1875			-0.00392
146	8311.34	0	4058.443	37.33768	22.72728	11.36364	2.1875	0.35	2.1875			-0.0025
147	8382.769	0	3987.364	36.68375	22.32924	11.16462	2.1875	0.35	2.1875			-0.0015
148	8452.946	0	3917.537	36.04134	21.9382	10.9691	2.1875	0.35	2.1875			-0.0008
149	8521.895	0	3848.938	35.41023	21.55405	10.77703	2.1875	0.35	2.1875			-0.00037
150	8589.636	0	3781.547	34.79023	21.17666	10.58833	2.1875	0.35	2.1875			-0.00015

E.4 Scenario 4 Output Results

Time	"Aged Base Data 4 (AD4)"	"base contractors 4 (BC4)"	"Base Data 4 (BD4)"	"base data 4 decomposition rate a (BDR4a)"	"base data 4 decomposition rate b (BDR4b)"	"base data 4 decomposition rate c (BDR4c)"	"base data 4 production employees (BEP4)"	"base data 4 production rate (BDPR4)"	"base data 4 production workstations (BWP4)"	"base employees 4 (BE4)"	"base workstations 4 (BW4)"	"change in contractors 4 (dC4)"
151	8656.191	0	3715.341	34.18114	20.80591	10.40296	2.1875	0.35	2.1875			-3.8E-05
152	8721.581	0	3650.301	33.58277	20.44169	10.22084	2.1875	0.35	2.1875			1.53E-05
153	8785.826	0	3586.406	32.99493	20.08387	10.04194	2.1875	0.35	2.1875			3.81E-05
154	8848.947	0	3523.635	32.41745	19.73236	9.866179	2.1875	0.35	2.1875			2.29E-05
155	8910.963	0	3461.969	31.85012	19.38703	9.693514	2.1875	0.35	2.1875			1.53E-05
156	8971.894	0	3401.389	31.29278	19.04778	9.523888	2.1875	0.35	2.1875			1.53E-05
157	9031.758	0	3341.874	30.74524	18.71449	9.357247	2.1875	0.35	2.1875			7.63E-06
158	9090.575	0	3283.407	30.20735	18.38708	9.19354	2.1875	0.35	2.1875			1.53E-05
159	9148.363	0	3225.969	29.67892	18.06543	9.032714	2.1875	0.35	2.1875			1.53E-05
160	9205.141	0	3169.542	29.15979	17.74944	8.874718	2.1875	0.35	2.1875			1.53E-05

E.4 Scenario 4 Output Results

Time	"change in employees 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustment time (Cat4)"	"contract or 4 maintenance standard (CMS4)"	"contract or 4 production standard (CPS4)"	"Contractors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contractor 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employee 4 (cpE4)"	"cost per workstation 4 (cpW4)"	"Data 4 (D4)"
1	5.591906	16.77572	2	0.246	0.123	150.2563	67512.32	14000	136014.2	8000	2000	20.95908
2	3.262689	9.788066				280.952	33986.11		82818.27			57.46026
3	1.847266	5.541798				398.1953	22708.97		57568.8			111.9676
4	1.05702	3.171059				483.3006	17051.13		42100.21			182.0224
5	0.613331	1.839994				539.3942	13650.23		32157.45			263.1828
6	0.359536	1.078608				574.6984	11380.38		25500.39			351.6077
7	0.212155	0.636464				596.3964	9757.795		20861.93			444.5868
8	0.125701	0.377101				609.5606	8540.158		17510.97			540.3588
9	0.074661	0.223981				617.4894	7592.695		15011.95			637.8233
10	0.044411	0.133232				622.2448	6834.466		13095.89			736.3065
11	0.026441	0.079323				625.0898	6213.924		11590.9			835.4003
12	0.015752	0.047254				626.7896	5696.688		10383.61			934.8594
13	0.009386	0.028158				627.8042	5258.943		9397.092			1034.537
14	0.005594	0.016782				628.4095	4883.672		8577.858			1134.344
15	0.003334	0.010002				628.7706	4558.392		7887.817			1234.229
16	0.001987	0.005962				628.9859	4273.736		7299.297			1334.161
17	0.001184	0.003554				629.1143	4022.542		6791.803			1434.12
18	0.000706	0.002118				629.1908	3799.238		6349.896			1534.096
19	0.000421	0.001263				629.2364	3599.422		5961.758			1634.081
20	0.000252	0.000754				629.2635	3419.575		5618.21			1734.073
21	0.00015	0.00045				629.2798	3256.844		5312.026			1834.068
22	8.96E-05	0.000268				629.2895	3108.898		5037.45			1934.064
23	5.28E-05	0.000159				629.2953	2973.81		4789.84			2034.063
24	3.18E-05	9.54E-05				629.2987	2849.972		4565.418			2134.062
25	1.84E-05	5.59E-05				629.3008	2736.035		4361.078			2234.061
26	1.08E-05	3.18E-05				629.302	2630.859		4174.241			2334.06
27	6.36E-06	2.03E-05				629.3027	2533.469		4002.753			2434.06
28	3.81E-06	1.14E-05				629.3032	2443.032		3844.798			2534.06
29	1.91E-06	6.36E-06				629.3035	2358.83		3698.835			2634.06
30	1.27E-06	3.81E-06				629.3036	2280.238		3563.548			2734.06

E.4 Scenario 4 Output Results

Time	"change in employes 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustme nt time (Cat4)"	"contract or 4 maintena ince standard (CMS4)"	"contract or 4 producti on standard (CPS4)"	"Contract ors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contracto r 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employe e 4 (cpE4)"	"cost per workstati on 4 (cpW4)"	"Data 4 (D4)"
31	6.36E-07	2.54E-06				629.3037	2206.715		3437.809			2834.06
32	6.36E-07	2.54E-06				629.3037	2137.784		3320.64			2934.06
33	6.36E-07	2.54E-06				629.3037	2073.03		3211.194			3034.06
34	6.36E-07	2.54E-06				629.3037	2012.083		3108.733			3134.06
35	6.36E-07	2.54E-06				629.3037	1954.618		3012.608			3234.06
36	6.36E-07	2.54E-06				629.3037	1900.344		2922.25			3334.06
37	1.084639	3.253918				629.3037	1865.703		2862.724			3403.386
38	0.53307	1.599208				721.1559	1832.604		3174.401			3479.104
39	0.290679	0.872036				767.082	1800.948		3278.689			3566.822
40	0.180634	0.541902				790.045	1770.644		3284			3660.186
41	0.132379	0.397135				801.5266	1741.607		3243.441			3756.296
42	0.114035	0.342103				807.2673	1713.762		3182.748			3853.759
43	0.110433	0.331299				810.1378	1687.038		3114.287			3951.892
44	0.114186	0.342559				811.5729	1661.369		3043.921			4050.357
45	0.121648	0.364944				812.2905	1636.696		2974.369			4148.984
46	0.131009	0.393027				812.6494	1612.961		2906.836			4247.69
47	0.141366	0.4241				812.8287	1590.114		2841.797			4346.434
48	0.152267	0.456802				812.9185	1568.107		2779.388			4445.193
49	0.163484	0.490452				812.9633	1546.895		2719.584			4543.959
50	0.1749	0.5247				812.9857	1526.437		2662.29			4642.726
51	0.186455	0.559367				812.9969	1506.693		2607.383			4741.492
52	0.198119	0.594357				813.0026	1487.629		2554.736			4840.255
53	0.209872	0.629616				813.0054	1469.21		2504.22			4939.017
54	0.221704	0.665112				813.0067	1451.404		2455.716			5037.775
55	0.23361	0.700829				813.0074	1434.183		2409.108			5136.531
56	0.245582	0.736746				813.0078	1417.519		2364.291			5235.284
57	0.257617	0.772853				813.0079	1401.386		2321.165			5334.036
58	0.269714	0.809142				813.0081	1385.76		2279.638			5432.785
59	0.28187	0.845609				813.0081	1370.617		2239.625			5531.533
60	0.294081	0.882244				813.0081	1355.936		2201.047			5630.279

E.4 Scenario 4 Output Results

Time	"change in employees 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustment time (Cat4)"	"contract or 4 maintenance standard (CMS4)"	"contract or 4 production standard (CPS4)"	"Contractors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contractor 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employee 4 (cpE4)"	"cost per workstation 4 (cpW4)"	"Data 4 (D4)"
61	0.306346	0.919039				813.0081	1341.697		2163.828			5729.024
62	0.318664	0.955991				813.0081	1327.881		2127.901			5827.768
63	0.331031	0.993093				813.0081	1314.47		2093.2			5926.511
64	0.343447	1.030342				813.0081	1301.447		2059.666			6025.254
65	0.35591	1.067731				813.0081	1288.796		2027.241			6123.996
66	0.36842	1.105261				813.0081	1276.501		1995.874			6222.738
67	0.380975	1.142924				813.0081	1264.549		1965.514			6321.48
68	0.393572	1.180717				813.0081	1252.926		1936.115			6420.223
69	0.406214	1.218643				813.0081	1241.618		1907.634			6518.965
70	0.418897	1.256691				813.0081	1230.613		1880.029			6617.708
71	0.43162	1.294861				813.0081	1219.901		1853.263			6716.452
72	0.444384	1.33315				813.0081	1209.469		1827.298			6815.197
73	1.368664	4.105994				813.0081	1206.005		1812.103			6875.777
74	2.328435	6.985304				813.0081	1202.612		1796.239			6947.169
75	3.289458	9.868375				813.0081	1199.287		1782.546			7018.823
76	4.233454	12.70036				813.0081	1196.03		1770.732			7091.66
77	5.134684	15.40406				813.0081	1192.838		1760.489			7166.587
78	5.958766	17.8763				813.0081	1189.709		1751.482			7244.483
79	6.66327	19.98981				813.0081	1186.644		1743.339			7326.173
80	7.200409	21.60123				813.0081	1183.639		1735.646			7412.395
81	7.521738	22.56522				813.0081	1180.693		1727.947			7503.758
82	7.58432	22.75296				813.0081	1177.805		1719.761			7600.706
83	7.357362	22.07209				813.0081	1174.974		1710.604			7703.465
84	6.828156	20.48447				813.0081	1172.197		1700.022			7812.009
85	6.006159	18.01848				813.0081	1169.475		1687.626			7926.033
86	4.924468	14.7734				813.0081	1166.805		1673.133			8044.948
87	3.638371	10.91512				813.0081	1164.187		1656.39			8167.888
88	2.221172	6.663518				813.0081	1161.619		1637.394			8293.753
89	1.574528	4.723582				813.0081	1159.1		1616.295			8421.26
90	1.387592	4.162776				813.0081	1156.629		1597.458			8534.362

E.4 Scenario 4 Output Results

Time	"change in employees 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustment time (Cat4)"	"contract or 4 maintenance standard (CMS4)"	"contract or 4 production standard (CPS4)"	"Contractors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contractor 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employee 4 (cpE4)"	"cost per workstation 4 (cpW4)"	"Data 4 (D4)"
91	1.34222	4.026662				813.0081	1154.205		1580.657			8637.365
92	1.344704	4.034113				813.0081	1151.827		1564.773			8737.051
93	1.362511	4.087534				813.0081	1149.493		1549.436			8835.687
94	1.385133	4.155396				813.0081	1147.203		1534.521			8933.995
95	1.409242	4.227727				813.0081	1144.956		1519.983			9032.205
96	1.433792	4.301376				813.0081	1142.751		1505.798			9130.388
97	1.458449	4.375351				813.0081	1140.587		1491.954			9228.565
98	1.483112	4.449336				813.0081	1138.462		1478.438			9326.745
99	1.507745	4.523239				813.0081	1136.377		1465.24			9424.93
100	1.532337	4.597015				813.0081	1134.331		1452.348			9523.119
101	1.556885	4.670654				813.0081	1132.321		1439.755			9621.314
102	1.581383	4.744151				813.0081	1130.349		1427.452			9719.516
103	1.605831	4.817495				813.0081	1128.412		1415.428			9817.722
104	1.630226	4.890681				813.0081	1126.51		1403.676			9915.934
105	1.65457	4.963715				813.0081	1124.643		1392.188			10014.15
106	1.678855	5.036565				813.0081	1122.81		1380.956			10112.38
107	1.703086	5.109258				813.0081	1121.01		1369.973			10210.6
108	1.727257	5.181773				813.0081	1119.241		1359.231			10308.84
109	2.177686	6.533061				813.0081	1120.638		1352.475			10378.22
110	2.339921	7.019765				813.0081	1122.013		1343.93			10466.88
111	2.413902	7.241709				813.0081	1123.367		1334.962			10561.74
112	2.458435	7.375305				813.0081	1124.701		1325.99			10658.68
113	2.49285	7.478551				813.0081	1126.014		1317.151			10756.35
114	2.523725	7.571177				813.0081	1127.307		1308.484			10854.27
115	2.553319	7.659958				813.0081	1128.58		1300			10952.28
116	2.582402	7.747208				813.0081	1129.834		1291.7			11050.33
117	2.611243	7.83373				813.0081	1131.068		1283.581			11148.39
118	2.639926	7.919779				813.0081	1132.283		1275.638			11246.46
119	2.668479	8.005437				813.0081	1133.479		1267.867			11344.55
120	2.696915	8.090749				813.0081	1134.657		1260.264			11442.64

E.4 Scenario 4 Output Results

Time	"change in employees 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustment time (Cat4)"	"contract or 4 maintenance standard (CMS4)"	"contract or 4 production standard (CPS4)"	"Contractors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contractor 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employee 4 (cpE4)"	"cost per workstation 4 (cpW4)"	"Data 4 (D4)"
121	2.725229	8.17569				813.0081	1135.816		1252.823			11540.74
122	2.753413	8.260243				813.0081	1136.958		1245.541			11638.84
123	-8.294	-24.882				813.0081	1138.081		1238.413			11736.95
124	-13.2041	-39.6124				451.7513	533.2379		779.2922			12012.81
125	-10.0225	-30.0674				279.549	542.7587		564.3536			11988.58
126	-5.69344	-17.0803				192.6724	552.449		452.9433			11942.35
127	-2.61739	-7.85218				156.6599	562.3116		405.2083			11908.26
128	-0.90003	-2.70008				142.7398	572.3497		386.4091			11888.44
129	-0.07376	-0.22127				138.3096	582.5663		380.4594			11878.21
130	0.253592	0.760778				137.9559	592.9646		380.1043			11873.56
131	0.329774	0.989324				139.1694	603.5478		381.8878			11871.9
132	0.29593	0.887792				140.759	614.3192		384.1582			11871.68
133	0.226351	0.679057				142.1988	625.2821		386.1928			11872.06
134	0.156235	0.468704				143.3094	636.4399		387.7517			11872.6
135	0.099266	0.297796				144.0809	647.7958		388.8294			11873.1
136	0.058262	0.174784				144.5733	659.3537		389.5143			11873.49
137	0.031273	0.093821				144.8631	671.1168		389.9158			11873.76
138	0.014872	0.044617				145.0189	683.0889		390.1306			11873.93
139	0.005709	0.017131				145.093	695.2737		390.2322			11874.04
140	0.001091	0.003276				145.1215	707.6748		390.2707			11874.09
141	-0.00089	-0.00266				145.127	720.2961		390.2776			11874.12
142	-0.00147	-0.00442				145.1225	733.1415		390.2709			11874.13
143	-0.00141	-0.00423				145.1152	746.2149		390.2604			11874.13
144	-0.00111	-0.00334				145.1081	759.5204		390.2505			11874.13
145	-0.00079	-0.00235				145.1026	773.0618		390.2427			11874.13
146	-0.0005	-0.00151				145.0987	786.8436		390.2373			11874.12
147	-0.0003	-0.0009				145.0962	800.8699		390.2338			11874.12
148	-0.00016	-0.00048				145.0947	815.1449		390.2317			11874.12
149	-7.6E-05	-0.00023				145.0939	829.673		390.2306			11874.12
150	-2.9E-05	-8.6E-05				145.0935	844.4587		390.2301			11874.12

E.4 Scenario 4 Output Results

Time	"change in employees 4 (dE4)"	"change in workstations 4 (dW4)"	"contract or 4 adjustment time (Cat4)"	"contract or 4 maintenance standard (CMS4)"	"contract or 4 production standard (CPS4)"	"Contractors 4 (C4)"	"cost per base data set 4 (cBD4)"	"cost per contractor 4 (cCp4)"	"cost per data set 4 (cD4)"	"cost per employee 4 (cpE4)"	"cost per workstation 4 (cpW4)"	"Data 4 (D4)"
151	-7.6E-06	-2E-05				145.0934	859.5065		390.2299			11874.12
152	3.81E-06	1.02E-05				145.0933	874.8209		390.2299			11874.12
153	5.09E-06	1.53E-05				145.0933	890.4067		390.2299			11874.12
154	5.09E-06	1.53E-05				145.0934	906.2686		390.2299			11874.12
155	3.81E-06	1.02E-05				145.0934	922.4114		390.2299			11874.12
156	3.81E-06	1.02E-05				145.0934	938.8401		390.23			11874.12
157	1.27E-06	5.09E-06				145.0934	955.5596		390.23			11874.12
158	3.81E-06	1.02E-05				145.0934	972.5751		390.23			11874.12
159	3.81E-06	1.02E-05				145.0935	989.8917		390.23			11874.12
160	3.81E-06	1.02E-05				145.0935	1007.515		390.23			11874.12

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
1	0	0	0	0	0	0	0	0.4	0	11979.04	150.2563	51.18
2	0	0	0	0	0	0	0		0	11942.54	280.952	56.77191
3	0	0	0	0	0	0	0		0	11888.03	398.1953	60.0346
4	0	0	0	0	0	0	0		0	11817.98	483.3006	61.88186
5	0	0	0	0	0	0	0		0	11736.82	539.3942	62.93888
6	0	0	0	0	0	0	0		0	11648.39	574.6984	63.55222
7	0	0	0	0	0	0	0		0	11555.41	596.3964	63.91175
8	0	0	0	0	0	0	0		0	11459.64	609.5606	64.12391
9	0	0	0	0	0	0	0		0	11362.18	617.4894	64.24961
10	0	0	0	0	0	0	0		0	11263.69	622.2448	64.32427
11	0	0	0	0	0	0	0		0	11164.6	625.0898	64.36868
12	0	0	0	0	0	0	0		0	11065.14	626.7896	64.39513
13	0	0	0	0	0	0	0		0	10965.46	627.8042	64.41088
14	0	0	0	0	0	0	0		0	10865.66	628.4095	64.42027
15	0	0	0	0	0	0	0		0	10765.77	628.7706	64.42586
16	0	0	0	0	0	0	0		0	10665.84	628.9859	64.42919
17	0	0	0	0	0	0	0		0	10565.88	629.1143	64.43118
18	0	0	0	0	0	0	0		0	10465.9	629.1908	64.43237
19	0	0	0	0	0	0	0		0	10365.92	629.2364	64.43307
20	0	0	0	0	0	0	0		0	10265.93	629.2635	64.43349
21	0	0	0	0	0	0	0		0	10165.93	629.2798	64.43375
22	0	0	0	0	0	0	0		0	10065.94	629.2895	64.4339
23	0	0	0	0	0	0	0		0	9965.938	629.2953	64.43399
24	0	0	0	0	0	0	0		0	9865.938	629.2987	64.43404
25	0	0	0	0	0	0	0		0	9765.939	629.3008	64.43407
26	0	0	0	0	0	0	0		0	9665.939	629.302	64.43409
27	0	0	0	0	0	0	0		0	9565.939	629.3027	64.4341
28	0	0	0	0	0	0	0		0	9465.94	629.3032	64.4341
29	0	0	0	0	0	0	0		0	9365.94	629.3035	64.43411
30	0	0	0	0	0	0	0		0	9265.94	629.3036	64.43411

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
31	0	0	0	0	0	0	0		0	9165.94	629.3037	64.43411
32	0	0	0	0	0	0	0		0	9065.94	629.3037	64.43411
33	0	0	0	0	0	0	0		0	8965.94	629.3037	64.43411
34	0	0	0	0	0	0	0		0	8865.94	629.3037	64.43411
35	0	0	0	0	0	0	0		0	8765.94	629.3037	64.43411
36	30.67335	0	0	0	0	0	0		0	8665.94	629.3037	64.43411
37	31.31116	0	0	0	64.43411	30.67335	30.67335		76.68338	8565.939	629.3037	0
38	32.00776	0	0	0	65.51875	32.36047	32.36047		80.90118	8488.536	721.1559	0
39	32.81476	0	0	0	66.05182	33.34428	33.34428		83.36071	8399.833	767.082	0
40	33.67371	0	0	0	66.3425	34.33128	34.33128		85.82821	8305.483	790.045	0
41	34.55792	0	0	0	66.52313	35.39713	35.39713		88.49281	8208.307	801.5266	0
42	35.45458	0	0	0	66.65551	36.52162	36.52162		91.30405	8109.72	807.2673	0
43	36.35741	0	0	0	66.76955	37.68211	37.68211		94.20528	8010.425	810.1378	0
44	37.26328	0	0	0	66.87998	38.86438	38.86438		97.16094	7910.779	811.5729	0
45	38.17066	0	0	0	66.99417	40.06044	40.06044		100.1511	7810.955	812.2905	0
46	39.07875	0	0	0	67.11582	41.26599	41.26599		103.165	7711.043	812.6494	0
47	39.98719	0	0	0	67.24683	42.47862	42.47862		106.1965	7611.088	812.8287	0
48	40.89578	0	0	0	67.3882	43.69698	43.69698		109.2424	7511.11	812.9185	0
49	41.80442	0	0	0	67.54047	44.92022	44.92022		112.3006	7411.121	812.9633	0
50	42.71308	0	0	0	67.70395	46.14779	46.14779		115.3695	7311.126	812.9857	0
51	43.62172	0	0	0	67.87885	47.37927	47.37927		118.4482	7211.129	812.9969	0
52	44.53035	0	0	0	68.0653	48.61429	48.61429		121.5357	7111.13	813.0026	0
53	45.43895	0	0	0	68.26342	49.85257	49.85257		124.6314	7011.131	813.0054	0
54	46.34753	0	0	0	68.47329	51.09382	51.09382		127.7345	6911.131	813.0067	0
55	47.25608	0	0	0	68.69499	52.33778	52.33778		130.8444	6811.131	813.0074	0
56	48.16462	0	0	0	68.9286	53.58418	53.58418		133.9604	6711.132	813.0078	0
57	49.07313	0	0	0	69.17419	54.83277	54.83277		137.0819	6611.131	813.0079	0
58	49.98162	0	0	0	69.4318	56.08332	56.08332		140.2083	6511.131	813.0081	0
59	50.8901	0	0	0	69.70152	57.33559	57.33559		143.339	6411.132	813.0081	0
60	51.79856	0	0	0	69.98338	58.58934	58.58934		146.4733	6311.132	813.0081	0

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
61	52.70702	0	0	0	70.27747	59.84433	59.84433		149.6108	6211.132	813.0081	0
62	53.61547	0	0	0	70.58381	61.10036	61.10036		152.7509	6111.131	813.0081	0
63	54.5239	0	0	0	70.90247	62.35722	62.35722		155.8931	6011.131	813.0081	0
64	55.43234	0	0	0	71.23351	63.61467	63.61467		159.0367	5911.131	813.0081	0
65	56.34077	0	0	0	71.57695	64.87254	64.87254		162.1813	5811.131	813.0081	0
66	57.2492	0	0	0	71.93286	66.13058	66.13058		165.3265	5711.131	813.0081	0
67	58.15762	0	0	0	72.30128	67.38863	67.38863		168.4716	5611.131	813.0081	0
68	59.06605	0	0	0	72.68226	68.64648	68.64648		171.6162	5511.131	813.0081	0
69	59.97448	0	0	0	73.07583	69.90395	69.90395		174.7599	5411.131	813.0081	0
70	60.88292	0	0	0	73.48204	71.16086	71.16086		177.9021	5311.131	813.0081	0
71	61.79136	0	0	0	73.90094	72.41702	72.41702		181.0426	5211.131	813.0081	0
72	62.69981	38.1651	0	0	74.33256	73.67227	73.67227		184.1807	5111.131	813.0081	0
73	63.25715	38.50435	0	0	74.77694	113.0915	113.0915		228.7059	5011.131	813.0081	0
74	63.91396	38.90415	0	0	76.14561	141.6995	141.6995		232.8118	4911.131	813.0081	0
75	64.57317	39.30541	0	0	78.47404	170.0456	170.0456		239.7971	4811.131	813.0081	0
76	65.24327	39.71329	0	0	81.7635	197.2091	197.2091		249.6655	4711.131	813.0081	0
77	65.9326	40.13288	0	0	85.99696	222.2819	222.2819		262.3659	4611.131	813.0081	0
78	66.64925	40.56911	0	0	91.13164	244.3854	244.3854		277.77	4511.131	813.0081	0
79	67.40079	41.02657	0	0	97.0904	262.6955	262.6955		295.6463	4411.131	813.0081	0
80	68.19403	41.50941	0	0	103.7537	276.4745	276.4745		315.6361	4311.131	813.0081	0
81	69.03458	42.02105	0	0	110.9541	285.1108	285.1108		337.2373	4211.131	813.0081	0
82	69.9265	42.56395	0	0	118.4758	288.1631	288.1631		359.8025	4111.131	813.0081	0
83	70.87188	43.1394	0	0	126.0601	285.4044	285.4044		382.5555	4011.131	813.0081	0
84	71.87048	43.74725	0	0	133.4175	276.8607	276.8607		404.6276	3911.131	813.0081	0
85	72.91951	44.38578	0	0	140.2457	262.836	262.836		425.112	3811.131	813.0081	0
86	74.01352	45.0517	0	0	146.2518	243.9214	243.9214		443.1305	3711.131	813.0081	0
87	75.14457	45.74017	0	0	151.1763	220.981	220.981		457.9039	3611.131	813.0081	0
88	76.30253	46.44501	0	0	154.8147	195.1163	195.1163		468.819	3511.131	813.0081	0
89	77.47559	47.15905	0	0	157.0358	167.6097	167.6097		419.0242	3411.131	813.0081	0
90	78.51614	47.79243	0	0	158.6104	154.5072	154.5072		386.268	3311.131	813.0081	0

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
91	79.46376	48.36924	0	0	159.9979	151.5042	151.5042		378.7605	3211.131	813.0081	0
92	80.38087	48.92748	0	0	161.3402	151.8183	151.8183		379.5457	3111.131	813.0081	0
93	81.28831	49.47984	0	0	162.6849	153.1827	153.1827		382.9567	3011.131	813.0081	0
94	82.19276	50.03037	0	0	164.0474	154.8737	154.8737		387.1843	2911.131	813.0081	0
95	83.09629	50.58035	0	0	165.4325	156.6637	156.6637		391.6591	2811.131	813.0081	0
96	83.99957	51.13017	0	0	166.8418	158.481	158.481		396.2025	2711.131	813.0081	0
97	84.9028	51.67997	0	0	168.2756	160.3032	160.3032		400.7579	2611.131	813.0081	0
98	85.80606	52.22977	0	0	169.734	162.1232	162.1232		405.3079	2511.132	813.0081	0
99	86.70936	52.77961	0	0	171.2171	163.9387	163.9387		409.8467	2411.132	813.0081	0
100	87.6127	53.32946	0	0	172.7249	165.749	165.749		414.3725	2311.132	813.0081	0
101	88.5161	53.87936	0	0	174.2572	167.5538	167.5538		418.8845	2211.132	813.0081	0
102	89.41955	54.42929	0	0	175.8141	169.3531	169.3531		423.3826	2111.131	813.0081	0
103	90.32304	54.97924	0	0	177.3955	171.1467	171.1467		427.8667	2011.132	813.0081	0
104	91.22659	55.52922	0	0	179.0013	172.9346	172.9346		432.3365	1911.132	813.0081	0
105	92.1302	56.07925	0	0	180.6315	174.7169	174.7169		436.7921	1811.132	813.0081	0
106	93.03385	56.6293	0	0	182.2861	176.4934	176.4934		441.2336	1711.132	813.0081	0
107	93.93756	57.17938	0	0	183.965	178.2643	178.2643		445.6607	1611.131	813.0081	0
108	94.84133	57.7295	28.86475	0	185.668	180.0294	180.0294		450.0735	1511.131	813.0081	0
109	95.47959	58.11801	29.059	0	187.3953	210.6536	210.6536		526.6339	1411.131	813.0081	0
110	96.29533	58.61455	29.30727	0	189.573	221.9859	221.9859		554.9648	1311.13	813.0081	0
111	97.16799	59.14573	29.57287	0	191.9129	227.1311	227.1311		567.8277	1211.131	813.0081	0
112	98.0599	59.68863	29.84432	0	194.3268	230.1848	230.1848		575.4621	1111.131	813.0081	0
113	98.95843	60.23556	30.11778	0	196.7852	232.5184	232.5184		581.2961	1011.131	813.0081	0
114	99.85928	60.78391	30.39195	0	199.2781	234.5997	234.5997		586.4993	911.1307	813.0081	0
115	100.761	61.33276	30.66638	0	201.8018	236.5896	236.5896		591.4739	811.1312	813.0081	0
116	101.663	61.88182	30.94091	0	204.3551	238.543	238.543		596.3575	711.1308	813.0081	0
117	102.5652	62.43098	31.21549	0	206.9375	240.4792	240.4792		601.1981	611.1311	813.0081	0
118	103.4675	62.98019	31.4901	0	209.5488	242.4047	242.4047		606.0117	511.1314	813.0081	0
119	104.3698	63.52946	31.76473	0	212.1887	244.3218	244.3218		610.8044	411.1313	813.0081	0
120	105.2723	64.07877	32.03938	0	214.8572	246.2314	246.2314		615.5784	311.131	813.0081	0

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
121	106.1748	64.62811	32.31406	0	217.5541	248.1338	248.1338		620.3345	211.1308	813.0081	0
122	107.0773	65.1775	32.58875	0	220.2793	250.0293	250.0293		625.0732	111.1308	813.0081	0
123	107.9799	65.72692	32.86346	722.5135	223.0327	251.918	251.918		629.795	11.13083	813.0081	0
124	110.5178	67.27172	33.63586	451.7513	190.1541	76.06165	76.06165		190.1541	0	0	0
125	110.2949	67.13602	33.56801	279.549	201.5346	100.2946	100.2946		250.7364	0	0	0
126	109.8696	66.87717	33.43859	192.6724	191.5122	146.5172	146.5172		366.293	0	0	0
127	109.556	66.68625	33.34312	156.6599	185.8187	180.61	180.61		451.5251	0	0	0
128	109.3736	66.57525	33.28762	142.7398	183.2013	200.4321	200.4321		501.0803	0	0	0
129	109.2795	66.51798	33.25899	138.3096	182.3013	210.6574	210.6574		526.6435	0	0	0
130	109.2368	66.49196	33.24598	137.9559	182.2276	215.3048	215.3048		538.262	0	0	0
131	109.2215	66.48263	33.24131	139.1694	182.4811	216.9708	216.9708		542.4271	0	0	0
132	109.2195	66.48141	33.24071	140.759	182.8109	217.1881	217.1881		542.9702	0	0	0
133	109.223	66.48355	33.24178	142.1988	183.1068	216.8077	216.8077		542.0192	0	0	0
134	109.2279	66.48656	33.24328	143.3094	183.3332	216.2681	216.2681		540.6703	0	0	0
135	109.2325	66.48936	33.24468	144.0809	183.4894	215.7693	215.7693		539.4233	0	0	0
136	109.2361	66.49153	33.24577	144.5733	183.5887	215.3814	215.3814		538.4536	0	0	0
137	109.2386	66.49305	33.24652	144.8631	183.6469	215.1106	215.1106		537.7764	0	0	0
138	109.2402	66.49402	33.24701	145.0189	183.6782	214.9369	214.9369		537.3423	0	0	0
139	109.2411	66.49459	33.2473	145.093	183.6931	214.8342	214.8342		537.0854	0	0	0
140	109.2416	66.4949	33.24745	145.1215	183.6988	214.7785	214.7785		536.9462	0	0	0
141	109.2419	66.49506	33.24753	145.127	183.6999	214.7517	214.7517		536.8792	0	0	0
142	109.242	66.49512	33.24756	145.1225	183.699	214.7411	214.7411		536.8527	0	0	0
143	109.242	66.49512	33.24756	145.1152	183.6975	214.7388	214.7388		536.8469	0	0	0
144	109.242	66.49512	33.24756	145.1081	183.6961	214.7401	214.7401		536.8502	0	0	0
145	109.242	66.49511	33.24755	145.1026	183.695	214.7425	214.7425		536.8562	0	0	0
146	109.2419	66.49509	33.24755	145.0987	183.6942	214.7449	214.7449		536.8624	0	0	0
147	109.2419	66.49508	33.24754	145.0962	183.6937	214.7468	214.7468		536.8671	0	0	0
148	109.2419	66.49508	33.24754	145.0947	183.6934	214.7482	214.7482		536.8705	0	0	0
149	109.2419	66.49507	33.24754	145.0939	183.6932	214.7491	214.7491		536.8727	0	0	0
150	109.2419	66.49506	33.24753	145.0935	183.6932	214.7496	214.7496		536.874	0	0	0

E.4 Scenario 4 Output Results

Time	"data 4 decomposition rate a (DDR4a)"	"data 4 decomposition rate b (DDR4b)"	"data 4 decomposition rate c (DDR4c)"	"data 4 maintenance contracts (CM4)"	"data 4 maintenance employees (EM4)"	"Data 4 Maintenance Queue (DM4)"	"data 4 maintenance required (DMN4)"	"data 4 maintenance standard (MS4)"	"data 4 maintenance workstations (WM4)"	"data 4 population requirement (DN4)"	"data 4 production contracts (CP4)"	"data 4 production employees (EP4)"
151	109.2419	66.49506	33.24753	145.0934	183.6931	214.7499	214.7499		536.8747	0	0	0
152	109.2419	66.49506	33.24753	145.0933	183.6931	214.75	214.75		536.8751	0	0	0
153	109.2419	66.49506	33.24753	145.0933	183.6931	214.7501	214.7501		536.8752	0	0	0
154	109.2419	66.49506	33.24753	145.0934	183.6931	214.7501	214.7501		536.8752	0	0	0
155	109.2419	66.49506	33.24753	145.0934	183.6931	214.7501	214.7501		536.8752	0	0	0
156	109.2419	66.49506	33.24753	145.0934	183.6931	214.7501	214.7501		536.8752	0	0	0
157	109.2419	66.49506	33.24753	145.0934	183.6931	214.7501	214.7501		536.8751	0	0	0
158	109.2419	66.49506	33.24753	145.0934	183.6931	214.7501	214.7501		536.8752	0	0	0
159	109.2419	66.49506	33.24753	145.0935	183.6931	214.7501	214.7501		536.8752	0	0	0
160	109.2419	66.49506	33.24753	145.0935	183.6931	214.7501	214.7501		536.8752	0	0	0

E.4 Scenario 4 Output Results

Time	"data 4 producti on function (Dp4)"	"data 4 producti on goal (Dp4*)"	"data 4 producti on rate (DPR4)"	"data 4 producti on requirem ent (DPN4)"	"data 4 producti on standard (PS4)"	"data 4 producti on workstati ons (WP4)"	"data 4 special employe es (SE4)"	"data 4 special workstati ons (SW4)"	"data 4 theoretic al maintena nce rate (DTM4)"	"data 4 theoretic al producti on rate (DTP4)"	"data 4 theoretic al special rate (DTS4)"	"data type 4 maintena nce rate (DMR4)"
1	50.50117	114	36.50117	100	0.16	157.915	2.1875	2.1875	0	36.50117	14	0
2	68.50737	114	54.50737	100		174.6907	2.1875	2.1875	0	54.50737	14	0
3	84.05473	114	70.05473	100		184.4788	2.1875	2.1875	0	70.05473	14	0
4	95.16045	114	81.16045	100		190.0206	2.1875	2.1875	0	81.16045	14	0
5	102.4249	114	88.4249	100		193.1917	2.1875	2.1875	0	88.4249	14	0
6	106.9791	114	92.97907	100		195.0316	2.1875	2.1875	0	92.97907	14	0
7	109.772	114	95.77205	100		196.1103	2.1875	2.1875	0	95.77205	14	0
8	111.4645	114	97.46449	100		196.7467	2.1875	2.1875	0	97.46449	14	0
9	112.4831	114	98.48313	100		197.1238	2.1875	2.1875	0	98.48313	14	0
10	113.0938	114	99.09383	100		197.3478	2.1875	2.1875	0	99.09383	14	0
11	113.4591	114	99.45911	100		197.481	2.1875	2.1875	0	99.45911	14	0
12	113.6773	114	99.67729	100		197.5604	2.1875	2.1875	0	99.67729	14	0
13	113.8075	114	99.80753	100		197.6076	2.1875	2.1875	0	99.80753	14	0
14	113.8852	114	99.88522	100		197.6358	2.1875	2.1875	0	99.88522	14	0
15	113.9316	114	99.93157	100		197.6526	2.1875	2.1875	0	99.93157	14	0
16	113.9592	114	99.9592	100		197.6626	2.1875	2.1875	0	99.9592	14	0
17	113.9757	114	99.97568	100		197.6685	2.1875	2.1875	0	99.97568	14	0
18	113.9855	114	99.9855	100		197.6721	2.1875	2.1875	0	99.9855	14	0
19	113.9914	114	99.99136	100		197.6742	2.1875	2.1875	0	99.99136	14	0
20	113.9948	114	99.99484	100		197.6755	2.1875	2.1875	0	99.99484	14	0
21	113.9969	114	99.99692	100		197.6762	2.1875	2.1875	0	99.99692	14	0
22	113.9982	114	99.99817	100		197.6767	2.1875	2.1875	0	99.99817	14	0
23	113.9989	114	99.99892	100		197.6769	2.1875	2.1875	0	99.99892	14	0
24	113.9993	114	99.99934	100		197.6771	2.1875	2.1875	0	99.99934	14	0
25	113.9996	114	99.99962	100		197.6772	2.1875	2.1875	0	99.99962	14	0
26	113.9998	114	99.99978	100		197.6772	2.1875	2.1875	0	99.99978	14	0
27	113.9999	114	99.99986	100		197.6773	2.1875	2.1875	0	99.99986	14	0
28	113.9999	114	99.99992	100		197.6773	2.1875	2.1875	0	99.99992	14	0
29	114	114	99.99995	100		197.6773	2.1875	2.1875	0	99.99995	14	0
30	114	114	99.99997	100		197.6773	2.1875	2.1875	0	99.99997	14	0

E.4 Scenario 4 Output Results

Time	"data 4 producti on function (Dp4)"	"data 4 producti on goal (Dp4*)"	"data 4 producti on rate (DPR4)"	"data 4 producti on requirem ent (DPN4)"	"data 4 producti on standard (PS4)"	"data 4 producti on workstati ons (WP4)"	"data 4 special employe es (SE4)"	"data 4 special workstati ons (SW4)"	"data 4 theoretic al maintena nce rate (DTM4)"	"data 4 theoretic al producti on rate (DTP4)"	"data 4 theoretic al special rate (DTS4)"	"data type 4 maintena nce rate (DMR4)"
31	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
32	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
33	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
34	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
35	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
36	114	114	99.99998	100		197.6773	2.1875	2.1875	0	99.99998	14	0
37	121.0284	144.6734	77.40436	100		120.9939	2.1875	2.1875	29.62403	77.40436	14	29.62403
38	133.7261	146.3605	88.70218	100		120.03	2.1875	2.1875	31.02395	88.70218	14	31.02395
39	140.1788	147.3443	94.35108	100		119.1697	2.1875	2.1875	31.82776	94.35108	14	31.82776
40	143.7834	148.3313	97.17554	100		117.5743	2.1875	2.1875	32.60787	97.17554	14	32.60787
41	146.0212	149.3971	98.58778	100		115.4516	2.1875	2.1875	33.43343	98.58778	14	33.43343
42	147.588	150.5216	99.29388	100		113.0375	2.1875	2.1875	34.29409	99.29388	14	34.29409
43	148.8221	151.6821	99.64695	100		110.4783	2.1875	2.1875	35.17515	99.64695	14	35.17515
44	149.8907	152.8644	99.82347	100		107.854	2.1875	2.1875	36.06721	99.82347	14	36.06721
45	150.8768	154.0604	99.91174	100		105.2064	2.1875	2.1875	36.96511	99.91174	14	36.96511
46	151.822	155.266	99.95587	100		102.5575	2.1875	2.1875	37.86612	99.95587	14	37.86612
47	152.7468	156.4786	99.97794	100		99.9189	2.1875	2.1875	38.76883	99.97794	14	38.76883
48	153.6615	157.697	99.98898	100		97.29711	2.1875	2.1875	39.67253	99.98898	14	39.67253
49	154.5713	158.9202	99.99448	100		94.69579	2.1875	2.1875	40.57685	99.99448	14	40.57685
50	155.4789	160.1478	99.99725	100		92.11732	2.1875	2.1875	41.48161	99.99725	14	41.48161
51	156.3853	161.3793	99.99863	100		89.56333	2.1875	2.1875	42.3867	99.99863	14	42.3867
52	157.2914	162.6143	99.99932	100		87.03515	2.1875	2.1875	43.29207	99.99932	14	43.29207
53	158.1974	163.8526	99.99966	100		84.53381	2.1875	2.1875	44.1977	99.99966	14	44.1977
54	159.1034	165.0938	99.99983	100		82.06032	2.1875	2.1875	45.10357	99.99983	14	45.10357
55	160.0096	166.3378	99.99991	100		79.61554	2.1875	2.1875	46.00968	99.99991	14	46.00968
56	160.916	167.5842	99.99996	100		77.20035	2.1875	2.1875	46.91602	99.99996	14	46.91602
57	161.8226	168.8328	99.99998	100		74.81561	2.1875	2.1875	47.82258	99.99998	14	47.82258
58	162.7294	170.0833	99.99999	100		72.4621	2.1875	2.1875	48.72936	99.99999	14	48.72936
59	163.6364	171.3356	100	100		70.14058	2.1875	2.1875	49.63635	100	14	49.63635
60	164.5436	172.5893	100	100		67.85181	2.1875	2.1875	50.54357	100	14	50.54357

E.4 Scenario 4 Output Results

Time	"data 4 production function (Dp4)"	"data 4 production goal (Dp4*)"	"data 4 production rate (DPR4)"	"data 4 production requirement (DPN4)"	"data 4 production standard (PS4)"	"data 4 production workstations (WP4)"	"data 4 special employees (SE4)"	"data 4 special workstations (SW4)"	"data 4 theoretical maintenance rate (DTM4)"	"data 4 theoretical production rate (DTP4)"	"data 4 theoretical special rate (DTS4)"	"data type 4 maintenance rate (DMR4)"
61	165.451	173.8443	100	100		65.59657	2.1875	2.1875	51.45098	100	14	51.45098
62	166.3586	175.1004	100	100		63.37552	2.1875	2.1875	52.35861	100	14	52.35861
63	167.2664	176.3572	100	100		61.18938	2.1875	2.1875	53.26645	100	14	53.26645
64	168.1745	177.6147	100	100		59.03883	2.1875	2.1875	54.17448	100	14	54.17448
65	169.0827	178.8725	100	100		56.92453	2.1875	2.1875	55.08271	100	14	55.08271
66	169.9911	180.1306	100	100		54.84714	2.1875	2.1875	55.99115	100	14	55.99115
67	170.8998	181.3886	100	100		52.8073	2.1875	2.1875	56.89977	100	14	56.89977
68	171.8086	182.6465	100	100		50.80557	2.1875	2.1875	57.80859	100	14	57.80859
69	172.7176	183.9039	100	100		48.84265	2.1875	2.1875	58.71757	100	14	58.71757
70	173.6268	185.1609	100	100		46.91901	2.1875	2.1875	59.62676	100	14	59.62676
71	174.5361	186.417	100	100		45.03529	2.1875	2.1875	60.53611	100	14	60.53611
72	175.4456	187.6723	100	100		43.19203	2.1875	2.1875	61.44564	100	14	61.44564
73	187.1535	227.0915	100	100		0	2.1875	2.1875	73.15355	100	14	73.15355
74	188.472	255.6995	100	100		0	2.1875	2.1875	74.47201	100	14	74.47201
75	190.715	284.0456	100	100		0	2.1875	2.1875	76.71503	100	14	76.71503
76	193.8838	311.2091	100	100		0	2.1875	2.1875	79.88381	100	14	79.88381
77	197.962	336.2819	100	100		0	2.1875	2.1875	83.96197	100	14	83.96197
78	202.9083	358.3854	100	100		0	2.1875	2.1875	88.90826	100	14	88.90826
79	208.6484	376.6955	100	100		0	2.1875	2.1875	94.64838	100	14	94.64838
80	215.0672	390.4745	100	100		0	2.1875	2.1875	101.0672	100	14	101.0672
81	222.0034	399.1108	100	100		0	2.1875	2.1875	108.0033	100	14	108.0033
82	229.2491	402.1631	100	100		0	2.1875	2.1875	115.249	100	14	115.249
83	236.555	399.4044	100	100		0	2.1875	2.1875	122.555	100	14	122.555
84	243.6424	390.8607	100	100		0	2.1875	2.1875	129.6424	100	14	129.6424
85	250.2199	376.836	100	100		0	2.1875	2.1875	136.2199	100	14	136.2199
86	256.0057	357.9214	100	100		0	2.1875	2.1875	142.0057	100	14	142.0057
87	260.7494	334.981	100	100		0	2.1875	2.1875	146.7494	100	14	146.7494
88	264.2542	309.1163	100	100		0	2.1875	2.1875	150.2542	100	14	150.2542
89	251.7371	281.6097	100	100		56.45834	2.1875	2.1875	137.7371	100	14	137.7371
90	243.3115	268.5072	100	100		93.93814	2.1875	2.1875	129.3115	100	14	129.3115

E.4 Scenario 4 Output Results

Time	"data 4 production function (Dp4)"	"data 4 production goal (Dp4*)"	"data 4 production rate (DPR4)"	"data 4 production requirement (DPN4)"	"data 4 production standard (PS4)"	"data 4 production workstations (WP4)"	"data 4 special employees (SE4)"	"data 4 special workstations (SW4)"	"data 4 theoretical maintenance rate (DTM4)"	"data 4 theoretical production rate (DTP4)"	"data 4 theoretical special rate (DTS4)"	"data type 4 maintenance rate (DMR4)"
91	241.519	265.5042	100	100		105.6084	2.1875	2.1875	127.5189	100	14	127.5189
92	241.9439	265.8183	100	100		108.8499	2.1875	2.1875	127.9439	100	14	127.9439
93	243.0771	267.1827	100	100		109.473	2.1875	2.1875	129.0771	100	14	129.0771
94	244.4332	268.8737	100	100		109.3329	2.1875	2.1875	130.4332	100	14	130.4332
95	245.8593	270.6637	100	100		109.0135	2.1875	2.1875	131.8593	100	14	131.8593
96	247.3075	272.481	100	100		108.6979	2.1875	2.1875	133.3075	100	14	133.3075
97	248.7628	274.3032	100	100		108.4438	2.1875	2.1875	134.7628	100	14	134.7628
98	250.2203	276.1232	100	100		108.2692	2.1875	2.1875	136.2203	100	14	136.2203
99	251.6786	277.9387	100	100		108.1797	2.1875	2.1875	137.6786	100	14	137.6786
100	253.1374	279.749	100	100		108.1772	2.1875	2.1875	139.1374	100	14	139.1374
101	254.5962	281.5538	100	100		108.2622	2.1875	2.1875	140.5962	100	14	140.5962
102	256.0552	283.3531	100	100		108.4348	2.1875	2.1875	142.0552	100	14	142.0552
103	257.5143	285.1467	100	100		108.6949	2.1875	2.1875	143.5143	100	14	143.5143
104	258.9736	286.9346	100	100		109.0425	2.1875	2.1875	144.9736	100	14	144.9736
105	260.4329	288.7169	100	100		109.4776	2.1875	2.1875	146.4329	100	14	146.4329
106	261.8923	290.4934	100	100		109.9998	2.1875	2.1875	147.8923	100	14	147.8923
107	263.3518	292.2643	100	100		110.6093	2.1875	2.1875	149.3518	100	14	149.3518
108	264.8114	294.0294	100	100		111.3057	2.1875	2.1875	150.8114	100	14	150.8114
109	285.3242	324.6536	100	100		39.92706	2.1875	2.1875	171.3242	100	14	171.3242
110	293.072	335.9859	100	100		18.12927	2.1875	2.1875	179.072	100	14	179.072
111	296.8328	341.1311	100	100		12.28613	2.1875	2.1875	182.8328	100	14	182.8328
112	299.2593	344.1848	100	100		11.89343	2.1875	2.1875	185.2593	100	14	185.2593
113	301.2305	346.5184	100	100		13.43475	2.1875	2.1875	187.2305	100	14	187.2305
114	303.0453	348.5997	100	100		15.71008	2.1875	2.1875	189.0453	100	14	189.0453
115	304.8066	350.5895	100	100		18.3067	2.1875	2.1875	190.8066	100	14	190.8066
116	306.5496	352.543	100	100		21.08301	2.1875	2.1875	192.5495	100	14	192.5495
117	308.2862	354.4792	100	100		23.98969	2.1875	2.1875	194.2862	100	14	194.2862
118	310.0207	356.4047	100	100		27.00977	2.1875	2.1875	196.0207	100	14	196.0207
119	311.7545	358.3218	100	100		30.13684	2.1875	2.1875	197.7544	100	14	197.7544
120	313.488	360.2314	100	100		33.36835	2.1875	2.1875	199.488	100	14	199.488

E.4 Scenario 4 Output Results

Time	"data 4 production function (Dp4)"	"data 4 production goal (Dp4*)"	"data 4 production rate (DPR4)"	"data 4 production requirement (DPN4)"	"data 4 production standard (PS4)"	"data 4 production workstations (WP4)"	"data 4 special employees (SE4)"	"data 4 special workstations (SW4)"	"data 4 theoretical maintenance rate (DTM4)"	"data 4 theoretical production rate (DTP4)"	"data 4 theoretical special rate (DTS4)"	"data type 4 maintenance rate (DMR4)"
121	315.2214	362.1338	100	100		36.70294	2.1875	2.1875	201.2215	100	14	201.2215
122	316.9549	364.0293	100	100		40.13989	2.1875	2.1875	202.9549	100	14	202.9549
123	496.4267	277.0488	100	11.13083		43.67841	2.1875	2.1875	382.4267	100	14	382.4267
124	334.0938	90.06165	0	0		0	2.1875	2.1875	320.0938	0	14	187.1925
125	279.0126	114.2946	0	0		0	2.1875	2.1875	265.0126	0	14	164.7763
126	247.9864	160.5172	0	0		0	2.1875	2.1875	233.9864	0	14	176.0926
127	233.6429	194.61	0	0		0	2.1875	2.1875	219.6429	0	14	189.7633
128	227.6972	214.4321	0	0		0	2.1875	2.1875	213.6972	0	14	199.0112
129	225.7404	224.6574	0	0		0	2.1875	2.1875	211.7404	0	14	204.4091
130	225.5824	229.3048	0	0		0	2.1875	2.1875	211.5824	0	14	207.3087
131	226.1252	230.9708	0	0		0	2.1875	2.1875	212.1252	0	14	208.7281
132	226.8339	231.1881	0	0		0	2.1875	2.1875	212.8339	0	14	209.322
133	227.4731	230.8077	0	0		0	2.1875	2.1875	213.4731	0	14	209.4878
134	227.9644	230.2681	0	0		0	2.1875	2.1875	213.9644	0	14	209.4566
135	228.3047	229.7693	0	0		0	2.1875	2.1875	214.3047	0	14	209.3545
136	228.5214	229.3814	0	0		0	2.1875	2.1875	214.5214	0	14	209.2443
137	228.6488	229.1106	0	0		0	2.1875	2.1875	214.6488	0	14	209.1518
138	228.7173	228.9369	0	0		0	2.1875	2.1875	214.7173	0	14	209.084
139	228.7499	228.8342	0	0		0	2.1875	2.1875	214.7499	0	14	209.0387
140	228.7624	228.7785	0	0		0	2.1875	2.1875	214.7624	0	14	209.0108
141	228.7648	228.7517	0	0		0	2.1875	2.1875	214.7648	0	14	208.995
142	228.7628	228.7411	0	0		0	2.1875	2.1875	214.7628	0	14	208.987
143	228.7596	228.7388	0	0		0	2.1875	2.1875	214.7596	0	14	208.9834
144	228.7565	228.7401	0	0		0	2.1875	2.1875	214.7565	0	14	208.9822
145	228.7541	228.7425	0	0		0	2.1875	2.1875	214.7541	0	14	208.9822
146	228.7523	228.7449	0	0		0	2.1875	2.1875	214.7523	0	14	208.9827
147	228.7513	228.7468	0	0		0	2.1875	2.1875	214.7513	0	14	208.9832
148	228.7506	228.7482	0	0		0	2.1875	2.1875	214.7506	0	14	208.9836
149	228.7502	228.7491	0	0		0	2.1875	2.1875	214.7502	0	14	208.984
150	228.7501	228.7496	0	0		0	2.1875	2.1875	214.7501	0	14	208.9842

E.4 Scenario 4 Output Results

Time	"data 4 producti on function (Dp4)"	"data 4 producti on goal (Dp4*)"	"data 4 producti on rate (DPR4)"	"data 4 producti on requirem ent (DPN4)"	"data 4 producti on standard (PS4)"	"data 4 producti on workstati ons (WP4)"	"data 4 special employe es (SE4)"	"data 4 special workstati ons (SW4)"	"data 4 theoretic al maintena nce rate (DTM4)"	"data 4 theoretic al producti on rate (DTP4)"	"data 4 theoretic al special rate (DTS4)"	"data type 4 maintena nce rate (DMR4)"
151	228.75	228.7499	0	0		0	2.1875	2.1875	214.75	0	14	208.9843
152	228.75	228.75	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
153	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
154	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
155	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
156	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
157	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
158	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
159	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845
160	228.75	228.7501	0	0		0	2.1875	2.1875	214.75	0	14	208.9845

E.4 Scenario 4 Output Results

Time	"desired contracts data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employees 4 (E4)"	FINAL TIME	"improvement factor (if4)"	INITIAL TIME	"maintenance workstation 4 exponent (ewm4)"
1	411.6477	120.4704	361.4111	12	0.2	0.3	0.3	53.3675	160	-1.39313	0	0.8
2	515.4385	98.11167	294.335					58.95941		-0.4336		
3	568.4059	84.38928	253.1679					62.2221		-0.05838		
4	595.4878	76.75359	230.2608					64.06936		0.109748		
5	610.0026	72.48636	217.4591					65.12638		0.193911		
6	618.0944	70.05415	210.1624					65.73972		0.239119		
7	622.7249	68.64511	205.9353					66.09925		0.264452		
8	625.4182	67.81982	203.4594					66.31141		0.27901		
9	627.0001	67.33304	201.9991					66.43711		0.287501		
10	627.9349	67.0447	201.1341					66.51177		0.292497		
11	628.4893	66.87347	200.6204					66.55618		0.295453		
12	628.8188	66.77164	200.3149					66.58263		0.297207		
13	629.0149	66.71101	200.133					66.59838		0.29825		
14	629.1317	66.67489	200.0247					66.60777		0.298871		
15	629.2012	66.65337	199.9601					66.61336		0.29924		
16	629.2426	66.64054	199.9216					66.61669		0.29946		
17	629.2673	66.6329	199.8987					66.61868		0.299592		
18	629.282	66.62834	199.885					66.61987		0.29967		
19	629.2908	66.62563	199.8769					66.62057		0.299716		
20	629.296	66.62402	199.872					66.62099		0.299744		
21	629.2992	66.62305	199.8691					66.62125		0.299761		
22	629.301	66.62247	199.8674					66.6214		0.299771		
23	629.3021	66.62212	199.8663					66.62149		0.299777		
24	629.3029	66.62193	199.8657					66.62154		0.29978		
25	629.3032	66.6218	199.8654					66.62157		0.299782		
26	629.3034	66.62172	199.8651					66.62159		0.299784		
27	629.3036	66.62167	199.865					66.6216		0.299784		
28	629.3036	66.62165	199.8649					66.6216		0.299785		
29	629.3038	66.62164	199.8649					66.62161		0.299785		
30	629.3038	66.62163	199.8649					66.62161		0.299785		

E.4 Scenario 4 Output Results

Time	"desired contracts data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employ ees 4 (E4)"	FINAL TIME	"improve ment factor (if4)"	INITIAL TIME	"mainten ance workstation 4 exponent (ewm4)"
31	629.3038	66.62162	199.8648					66.62161		0.299785		
32	629.3038	66.62162	199.8648					66.62161		0.299785		
33	629.3038	66.62162	199.8648					66.62161		0.299785		
34	629.3038	66.62162	199.8648					66.62161		0.299785		
35	629.3038	66.62162	199.8648					66.62161		0.299785		
36	629.3038	66.62162	199.8648					66.62161		0.299785		
37	813.0081	79.63728	238.9118					66.62161		0.299785		
38	813.0081	74.10309	222.3092					67.70625		0.382278		
39	813.0082	71.72746	215.1824					68.23932		0.416635		
40	813.0081	70.69761	212.0928					68.53		0.432435		
41	813.0081	70.29918	210.8975					68.71063		0.440041		
42	813.0082	70.21143	210.6343					68.84301		0.443795		
43	813.0081	70.28224	210.8467					68.95705		0.445683		
44	813.0082	70.43771	211.3131					69.06748		0.446656		
45	813.0082	70.64145	211.9243					69.18167		0.447178		
46	813.0081	70.87543	212.6263					69.30332		0.447479		
47	813.0081	71.13073	213.3922					69.43433		0.447674		
48	813.0081	71.40291	214.2087					69.5757		0.447818		
49	813.0081	71.68977	215.0693					69.72797		0.447942		
50	813.0081	71.99025	215.9707					69.89145		0.448058		
51	813.0081	72.30381	216.9114					70.06635		0.448174		
52	813.0081	72.63023	217.8907					70.2528		0.448294		
53	813.0081	72.96938	218.9081					70.45092		0.44842		
54	813.0081	73.32124	219.9637					70.66079		0.448551		
55	813.0082	73.68581	221.0574					70.88249		0.44869		
56	813.0081	74.06309	222.1893					71.1161		0.448836		
57	813.0081	74.45309	223.3593					71.36169		0.448989		
58	813.0082	74.85587	224.5676					71.6193		0.44915		
59	813.0081	75.27145	225.8143					71.88902		0.449318		
60	813.0081	75.69986	227.0996					72.17088		0.449493		

E.4 Scenario 4 Output Results

Time	"desired contracts data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employ ees 4 (E4)"	FINAL TIME	"improve ment factor (if4)"	INITIAL TIME	"mainten ance workstation 4 exponent (ewm4)"
61	813.0081	76.14112	228.4234					72.46497		0.449676		
62	813.0081	76.59528	229.7858					72.77131		0.449866		
63	813.0081	77.06235	231.187					73.08997		0.450064		
64	813.0081	77.54237	232.6271					73.42101		0.45027		
65	813.0081	78.03537	234.1061					73.76445		0.450482		
66	813.0081	78.5414	235.6242					74.12036		0.450703		
67	813.0081	79.06049	237.1814					74.48878		0.450931		
68	813.0081	79.59263	238.7779					74.86976		0.451167		
69	813.0081	80.1379	240.4137					75.26333		0.45141		
70	813.0081	80.6963	242.0889					75.66954		0.45166		
71	813.0081	81.26788	243.8037					76.08844		0.451919		
72	813.0081	81.85266	245.558					76.52006		0.452185		
73	813.0081	93.38841	280.1653					76.96444		0.452458		
74	813.0081	106.2743	318.823					78.33311		0.453299		
75	813.0081	120.135	360.4052					80.66154		0.454723		
76	813.0081	134.7525	404.2574					83.951		0.456723		
77	813.0081	149.8007	449.4021					88.18446		0.459275		
78	813.0081	164.8243	494.4731					93.31914		0.462339		
79	813.0081	179.2371	537.7115					99.2779		0.465851		
80	813.0081	192.3461	577.0384					105.9412		0.469724		
81	813.0081	203.4024	610.2074					113.1416		0.473846		
82	813.0081	211.6752	635.0256					120.6633		0.478085		
83	813.0081	216.536	649.6081					128.2476		0.48229		
84	813.0081	217.5429	652.6287					135.605		0.486306		
85	813.0081	214.5071	643.5213					142.4332		0.489977		
86	813.0081	207.5329	622.5989					148.4393		0.493163		
87	813.0081	197.0242	591.0728					153.3638		0.495746		
88	813.0081	183.6562	550.9688					157.0022		0.497637		
89	813.0081	178.1177	534.353					159.2233		0.498785		
90	813.0081	177.449	532.3469					160.7979		0.499595		

E.4 Scenario 4 Output Results

Time	"desired contracts data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employees 4 (E4)"	FINAL TIME	"improvement factor (if4)"	INITIAL TIME	"maintenance workstation 4 exponent (ewm4)"
91	813.0081	178.2921	534.8763					162.1854		0.500307		
92	813.0081	179.6641	538.9924					163.5277		0.500994		
93	813.0081	181.2225	543.6676					164.8724		0.50168		
94	813.0081	182.8565	548.5695					166.2349		0.502374		
95	813.0081	184.5309	553.5928					167.62		0.503077		
96	813.0081	186.2348	558.7043					169.0293		0.50379		
97	813.0081	187.9644	563.8934					170.4631		0.504513		
98	813.0081	189.7189	569.1566					171.9215		0.505247		
99	813.0081	191.4976	574.4928					173.4046		0.505991		
100	813.0081	193.3004	579.9014					174.9124		0.506745		
101	813.0081	195.1273	585.3821					176.4447		0.507509		
102	813.0081	196.9782	590.9347					178.0016		0.508282		
103	813.0081	198.853	596.559					179.583		0.509066		
104	813.0081	200.7515	602.2547					181.1888		0.509858		
105	813.0081	202.6739	608.0218					182.819		0.510661		
106	813.0081	204.6199	613.8597					184.4736		0.511473		
107	813.0081	206.5895	619.7686					186.1525		0.512293		
108	813.0081	208.5826	625.748					187.8555		0.513123		
109	813.0081	215.715	647.1452					189.5828		0.513962		
110	813.0081	219.8395	659.5187					191.7605		0.515016		
111	813.0081	223.0672	669.2018					194.1004		0.516142		
112	813.0081	226.0155	678.0467					196.5143		0.517299		
113	813.0081	228.8869	686.6609					198.9727		0.518472		
114	813.0081	231.7503	695.251					201.4656		0.519655		
115	813.0081	234.6292	703.8876					203.9893		0.520847		
116	813.0081	237.5315	712.5945					206.5426		0.522047		
117	813.0081	240.4599	721.38					209.125		0.523255		
118	813.0081	243.4154	730.2463					211.7363		0.52447		
119	813.0081	246.3979	739.194					214.3762		0.525692		
120	813.0081	249.4076	748.2232					217.0447		0.52692		

E.4 Scenario 4 Output Results

Time	"desired contracts data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employ ees 4 (E4)"	FINAL TIME	"improve ment factor (if4)"	INITIAL TIME	"mainten ance workstation 4 exponent (ewm4)"
121	813.0081	252.4443	757.3333					219.7416		0.528156		
122	813.0081	255.5078	766.5236					222.4668		0.529397		
123	90.49454	125.6923	377.0769					225.2202		0.530646		
124	107.3465	58.47681	175.4305					216.9262		0.658883		
125	105.7959	83.45262	250.3579					203.7221		0.528014		
126	120.6473	125.3784	376.1352					193.6997		0.409644		
127	128.8197	156.5975	469.7927					188.0062		0.338208		
128	133.8793	174.5885	523.7657					185.3888		0.304855		
129	137.6022	183.6037	550.8113					184.4888		0.293376		
130	140.383	187.4582	562.3746					184.4151		0.292439		
131	142.3485	188.6259	565.878					184.6686		0.295644		
132	143.6387	188.5496	565.6489					184.9984		0.299794		
133	144.42	188.0106	564.0319					185.2943		0.303506		
134	144.8524	187.3955	562.1868					185.5207		0.306337		
135	145.0656	186.8681	560.6046					185.6769		0.308289		
136	145.1529	186.4753	559.4262					185.7762		0.309528		
137	145.1747	186.2097	558.6295					185.8344		0.310255		
138	145.1672	186.0442	558.1328					185.8657		0.310645		
139	145.15	185.9491	557.8476					185.8806		0.31083		
140	145.1324	185.8994	557.6985					185.8863		0.310901		
141	145.1181	185.8768	557.6306					185.8874		0.310915		
142	145.1078	185.8688	557.6068					185.8865		0.310904		
143	145.1011	185.8681	557.6046					185.885		0.310885		
144	145.097	185.8703	557.6111					185.8836		0.310868		
145	145.0947	185.8731	557.6196					185.8825		0.310854		
146	145.0937	185.8757	557.6274					185.8817		0.310844		
147	145.0932	185.8776	557.6332					185.8812		0.310838		
148	145.0931	185.879	557.6373					185.8809		0.310834		
149	145.0931	185.8798	557.6398					185.8807		0.310832		
150	145.0932	185.8803	557.6412					185.8807		0.310831		

E.4 Scenario 4 Output Results

Time	"desired contractors data 4 (C4*)"	"desired employees 4 (E4*)"	"desired workstations 2 (W2*)"	"employee 4 adjustment time (Eat4)"	"employee 4 maintenance exponent (eem4)"	"employee 4 production exponent (eep4)"	"employee 4 special exponent (ees4)"	"Employ ees 4 (E4)"	FINAL TIME	"improve ment factor (if4)"	INITIAL TIME	"mainten ance workstati on 4 exponent (ewm4)"
151	145.0933	185.8805	557.642					185.8806		0.310831		
152	145.0934	185.8807	557.6423					185.8806		0.310831		
153	145.0934	185.8807	557.6424					185.8806		0.310831		
154	145.0934	185.8807	557.6424					185.8806		0.310831		
155	145.0934	185.8807	557.6423					185.8806		0.310831		
156	145.0935	185.8807	557.6423					185.8806		0.310831		
157	145.0935	185.8806	557.6423					185.8806		0.310831		
158	145.0935	185.8807	557.6423					185.8806		0.310831		
159	145.0935	185.8807	557.6423					185.8806		0.310831		
160	145.0935	185.8807	557.6423					185.8806		0.310831		

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
1	2.739638	2.257373	1	14	6.4	14	14	2.393125	1	6822160	3628800	2156560
2	1.834614	1.664055		14		14		1.433601		6822160	3628800	2156560
3	1.427455	1.356259		14		14		1.058381		6822160	3628800	2156560
4	1.232127	1.197977		14		14		0.890252		6822160	3628800	2156560
5	1.130903	1.113011		14		14		0.806089		6822160	3628800	2156560
6	1.075511	1.065629		14		14		0.760881		6822160	3628800	2156560
7	1.044146	1.038516		14		14		0.735548		6822160	3628800	2156560
8	1.026015	1.022747		14		14		0.72099		6822160	3628800	2156560
9	1.015402	1.013485		14		14		0.712499		6822160	3628800	2156560
10	1.009145	1.008013		14		14		0.707503		6822160	3628800	2156560
11	1.005438	1.004767		14		14		0.704547		6822160	3628800	2156560
12	1.003237	1.002839		14		14		0.702793		6822160	3628800	2156560
13	1.001928	1.001691		14		14		0.70175		6822160	3628800	2156560
14	1.001149	1.001008		14		14		0.701129		6822160	3628800	2156560
15	1.000685	1.000601		14		14		0.70076		6822160	3628800	2156560
16	1.000408	1.000358		14		14		0.70054		6822160	3628800	2156560
17	1.000243	1.000213		14		14		0.700408		6822160	3628800	2156560
18	1.000145	1.000127		14		14		0.70033		6822160	3628800	2156560
19	1.000086	1.000076		14		14		0.700284		6822160	3628800	2156560
20	1.000052	1.000045		14		14		0.700256		6822160	3628800	2156560
21	1.000031	1.000027		14		14		0.700239		6822160	3628800	2156560
22	1.000018	1.000016		14		14		0.700229		6822160	3628800	2156560
23	1.000011	1.00001		14		14		0.700223		6822160	3628800	2156560
24	1.000007	1.000006		14		14		0.70022		6822160	3628800	2156560
25	1.000004	1.000003		14		14		0.700218		6822160	3628800	2156560
26	1.000002	1.000002		14		14		0.700216		6822160	3628800	2156560
27	1.000001	1.000001		14		14		0.700216		6822160	3628800	2156560
28	1.000001	1.000001		14		14		0.700215		6822160	3628800	2156560
29	1	1		14		14		0.700215		6822160	3628800	2156560
30	1	1		14		14		0.700215		6822160	3628800	2156560

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
31	1	1		14		14		0.700215		6822160	3628800	2156560
32	1	1		14		14		0.700215		6822160	3628800	2156560
33	1	1		14		14		0.700215		6822160	3628800	2156560
34	1	1		14		14		0.700215		6822160	3628800	2156560
35	1	1		14		14		0.700215		6822160	3628800	2156560
36	1	1		14		14		0.700215		6822160	3628800	2156560
37	1.291917	1.195367		14		14		0.700215		6822160	3628800	2156560
38	1.127368	1.094479		14		14		0.617722		6822160	3628800	2156560
39	1.059871	1.051116		14		14		0.583365		6822160	3628800	2156560
40	1.029065	1.03163		14		14		0.567565		6822160	3628800	2156560
41	1.014325	1.023119		14		14		0.559959		6822160	3628800	2156560
42	1.007111	1.019877		14		14		0.556205		6822160	3628800	2156560
43	1.003543	1.019218		14		14		0.554317		6822160	3628800	2156560
44	1.001768	1.019839		14		14		0.553344		6822160	3628800	2156560
45	1.000883	1.021101		14		14		0.552822		6822160	3628800	2156560
46	1.000441	1.022684		14		14		0.552521		6822160	3628800	2156560
47	1.000221	1.024432		14		14		0.552326		6822160	3628800	2156560
48	1.00011	1.026262		14		14		0.552182		6822160	3628800	2156560
49	1.000055	1.028135		14		14		0.552058		6822160	3628800	2156560
50	1.000028	1.030029		14		14		0.551942		6822160	3628800	2156560
51	1.000014	1.031934		14		14		0.551826		6822160	3628800	2156560
52	1.000007	1.033841		14		14		0.551706		6822160	3628800	2156560
53	1.000003	1.035748		14		14		0.55158		6822160	3628800	2156560
54	1.000002	1.037651		14		14		0.551449		6822160	3628800	2156560
55	1.000001	1.039549		14		14		0.55131		6822160	3628800	2156560
56	1	1.041439		14		14		0.551164		6822160	3628800	2156560
57	1	1.04332		14		14		0.551011		6822160	3628800	2156560
58	1	1.045191		14		14		0.55085		6822160	3628800	2156560
59	1	1.047051		14		14		0.550682		6822160	3628800	2156560
60	1	1.048898		14		14		0.550507		6822160	3628800	2156560

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
61	1	1.05073		14		14		0.550324		6822160	3628800	2156560
62	1	1.052548		14		14		0.550134		6822160	3628800	2156560
63	1	1.054349		14		14		0.549936		6822160	3628800	2156560
64	1	1.056133		14		14		0.54973		6822160	3628800	2156560
65	1	1.057899		14		14		0.549518		6822160	3628800	2156560
66	1	1.059647		14		14		0.549297		6822160	3628800	2156560
67	1	1.061374		14		14		0.549069		6822160	3628800	2156560
68	1	1.063081		14		14		0.548833		6822160	3628800	2156560
69	1	1.064767		14		14		0.54859		6822160	3628800	2156560
70	1	1.06643		14		14		0.54834		6822160	3628800	2156560
71	1	1.068071		14		14		0.548081		6822160	3628800	2156560
72	1	1.069689		14		14		0.547815		6822160	3628800	2156560
73	1	1.213397		14		14		0.547542		6822160	3628800	2156560
74	1	1.356697		14		14		0.546701		6822160	3628800	2156560
75	1	1.489372		14		14		0.545277		6822160	3628800	2156560
76	1	1.605132		14		14		0.543277		6822160	3628800	2156560
77	1	1.69872		14		14		0.540725		6822160	3628800	2156560
78	1	1.766244		14		14		0.537661		6822160	3628800	2156560
79	1	1.805408		14		14		0.534149		6822160	3628800	2156560
80	1	1.815593		14		14		0.530276		6822160	3628800	2156560
81	1	1.797769		14		14		0.526154		6822160	3628800	2156560
82	1	1.754263		14		14		0.521915		6822160	3628800	2156560
83	1	1.688421		14		14		0.51771		6822160	3628800	2156560
84	1	1.604239		14		14		0.513694		6822160	3628800	2156560
85	1	1.506019		14		14		0.510023		6822160	3628800	2156560
86	1	1.398099		14		14		0.506837		6822160	3628800	2156560
87	1	1.284685		14		14		0.504254		6822160	3628800	2156560
88	1	1.169769		14		14		0.502363		6822160	3628800	2156560
89	1	1.118666		14		14		0.501215		6822160	3628800	2156560
90	1	1.103553		14		14		0.500405		6822160	3628800	2156560

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
91	1	1.09931		14		14		0.499693		6822160	3628800	2156560
92	1	1.098677		14		14		0.499006		6822160	3628800	2156560
93	1	1.099168		14		14		0.49832		6822160	3628800	2156560
94	1	1.099989		14		14		0.497626		6822160	3628800	2156560
95	1	1.100888		14		14		0.496923		6822160	3628800	2156560
96	1	1.10179		14		14		0.49621		6822160	3628800	2156560
97	1	1.10267		14		14		0.495487		6822160	3628800	2156560
98	1	1.10352		14		14		0.494753		6822160	3628800	2156560
99	1	1.104339		14		14		0.494009		6822160	3628800	2156560
100	1	1.105127		14		14		0.493255		6822160	3628800	2156560
101	1	1.105884		14		14		0.492492		6822160	3628800	2156560
102	1	1.106609		14		14		0.491718		6822160	3628800	2156560
103	1	1.107304		14		14		0.490934		6822160	3628800	2156560
104	1	1.107969		14		14		0.490141		6822160	3628800	2156560
105	1	1.108604		14		14		0.489339		6822160	3628800	2156560
106	1	1.109209		14		14		0.488527		6822160	3628800	2156560
107	1	1.109787		14		14		0.487707		6822160	3628800	2156560
108	1	1.110335		14		14		0.486877		6822160	3628800	2156560
109	1	1.137841		14		14		0.486038		6822160	3628800	2156560
110	1	1.146428		14		14		0.484984		6822160	3628800	2156560
111	1	1.149236		14		14		0.483858		6822160	3628800	2156560
112	1	1.150123		14		14		0.482701		6822160	3628800	2156560
113	1	1.150343		14		14		0.481528		6822160	3628800	2156560
114	1	1.150322		14		14		0.480345		6822160	3628800	2156560
115	1	1.150203		14		14		0.479153		6822160	3628800	2156560
116	1	1.150036		14		14		0.477953		6822160	3628800	2156560
117	1	1.149838		14		14		0.476745		6822160	3628800	2156560
118	1	1.149616		14		14		0.47553		6822160	3628800	2156560
119	1	1.149372		14		14		0.474308		6822160	3628800	2156560
120	1	1.149107		14		14		0.47308		6822160	3628800	2156560

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
121	1	1.148824		14		14		0.471844		6822160	3628800	2156560
122	1	1.148521		14		14		0.470603		6822160	3628800	2156560
123	0.111308	0.558086		14		14		0.469354		6822160	3628800	2156560
124	0.237623	0.26957		14		14		0.341117		3193360	0	2156560
125	0.378452	0.409639		14		14		0.471986		3193360	0	2156560
126	0.626178	0.647282		14		14		0.590356		3193360	0	2156560
127	0.822289	0.832938		14		14		0.661792		3193360	0	2156560
128	0.937926	0.941742		14		14		0.695145		3193360	0	2156560
129	0.994885	0.995202		14		14		0.706624		3193360	0	2156560
130	1.017593	1.016501		14		14		0.707561		3193360	0	2156560
131	1.022843	1.021429		14		14		0.704356		3193360	0	2156560
132	1.020458	1.019196		14		14		0.700206		3193360	0	2156560
133	1.01562	1.014659		14		14		0.696494		3193360	0	2156560
134	1.010767	1.010106		14		14		0.693663		3193360	0	2156560
135	1.006834	1.006415		14		14		0.691711		3193360	0	2156560
136	1.004009	1.003763		14		14		0.690472		3193360	0	2156560
137	1.002151	1.002019		14		14		0.689745		3193360	0	2156560
138	1.001023	1.00096		14		14		0.689355		3193360	0	2156560
139	1.000393	1.000369		14		14		0.68917		3193360	0	2156560
140	1.000075	1.00007		14		14		0.689099		3193360	0	2156560
141	0.999939	0.999943		14		14		0.689085		3193360	0	2156560
142	0.999899	0.999905		14		14		0.689096		3193360	0	2156560
143	0.999903	0.999909		14		14		0.689115		3193360	0	2156560
144	0.999923	0.999928		14		14		0.689132		3193360	0	2156560
145	0.999946	0.999949		14		14		0.689146		3193360	0	2156560
146	0.999966	0.999968		14		14		0.689156		3193360	0	2156560
147	0.999979	0.999981		14		14		0.689162		3193360	0	2156560
148	0.999989	0.99999		14		14		0.689166		3193360	0	2156560
149	0.999995	0.999995		14		14		0.689168		3193360	0	2156560
150	0.999998	0.999998		14		14		0.689169		3193360	0	2156560

E.4 Scenario 4 Output Results

Time	"relative contractor production (RCP4)"	"relative production (Dp4*/Dp4)"	SAVEPER	"special data 4 production rate (SPR4)"	"special data 4 production standard (SPS4)"	"Special Data 4 Requirement (SN4)"	"special data 4 requirement rate (SNR4)"	"technical efficiency 4 (TE4)"	TIME STEP	"total base 4 cost (tBC4)"	"total base contractor 4 cost (cBC4)"	"total base employee 4 cost (cBC4)"
151	1	1		14		14		0.689169		3193360	0	2156560
152	1	1		14		14		0.689169		3193360	0	2156560
153	1	1		14		14		0.689169		3193360	0	2156560
154	1	1		14		14		0.689169		3193360	0	2156560
155	1	1		14		14		0.689169		3193360	0	2156560
156	1	1		14		14		0.689169		3193360	0	2156560
157	1	1		14		14		0.689169		3193360	0	2156560
158	1	1		14		14		0.689169		3193360	0	2156560
159	1	1		14		14		0.689169		3193360	0	2156560
160	1	1		14		14		0.689169		3193360	0	2156560

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
1	1036800	2103588	426940	2850733	320205	12	0.7	0.7	160.1025
2	1036800	3933328	471675.3	4758760	353756.5				176.8782
3	1036800	5574734	497776.8	6445843	373332.6				186.6663
4	1036800	6766209	512554.9	7663180	384416.2				192.2081
5	1036800	7551519	521011.1	8463288	390758.3				195.3792
6	1036800	8045777	525917.8	8966133	394438.3				197.2191
7	1036800	8349549	528794	9274939	396595.5				198.2978
8	1036800	8533849	530491.3	9462208	397868.4				198.9342
9	1036800	8644851	531496.9	9574971	398622.7				199.3113
10	1036800	8711427	532094.2	9642592	399070.6				199.5353
11	1036800	8751258	532449.4	9683044	399337.1				199.6685
12	1036800	8775054	532661	9707211	399495.7				199.7479
13	1036800	8789259	532787.1	9721636	399590.3				199.7951
14	1036800	8797734	532862.1	9730243	399646.5				199.8233
15	1036800	8802789	532906.9	9735376	399680.1				199.8401
16	1036800	8805803	532933.6	9738437	399700.1				199.8501
17	1036800	8807600	532949.4	9740261	399712.1				199.856
18	1036800	8808671	532958.9	9741349	399719.2				199.8596
19	1036800	8809309	532964.6	9741997	399723.4				199.8617
20	1036800	8809690	532967.9	9742384	399725.9				199.863
21	1036800	8809917	532970	9742614	399727.4				199.8637
22	1036800	8810053	532971.2	9742752	399728.3				199.8642
23	1036800	8810134	532971.9	9742835	399728.9				199.8644
24	1036800	8810182	532972.4	9742883	399729.2				199.8646
25	1036800	8810211	532972.6	9742913	399729.4				199.8647
26	1036800	8810228	532972.7	9742930	399729.5				199.8647
27	1036800	8810238	532972.8	9742941	399729.6				199.8648
28	1036800	8810245	532972.8	9742948	399729.6				199.8648
29	1036800	8810249	532972.9	9742952	399729.6				199.8648
30	1036800	8810250	532972.9	9742953	399729.6				199.8648

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
31	1036800	8810252	532972.9	9742955	399729.6				199.8648
32	1036800	8810252	532972.9	9742955	399729.6				199.8648
33	1036800	8810252	532972.9	9742955	399729.6				199.8648
34	1036800	8810252	532972.9	9742955	399729.6				199.8648
35	1036800	8810252	532972.9	9742955	399729.6				199.8648
36	1036800	8810252	532972.9	9742955	399729.6				199.8648
37	1036800	8810252	532972.9	9742955	399729.6				199.8648
38	1036800	10096182	541650	11044069	406237.5				203.1187
39	1036800	10739148	545914.6	11694499	409435.9				204.7179
40	1036800	11060631	548240	12020051	411180				205.59
41	1036800	11221373	549685.1	12183322	412263.8				206.1319
42	1036800	11301743	550744.1	12265545	413058				206.529
43	1036800	11341929	551656.4	12307327	413742.3				206.8711
44	1036800	11362021	552539.9	12328966	414404.8				207.2024
45	1036800	11372067	553453.4	12340610	415090				207.545
46	1036800	11377091	554426.6	12347338	415819.8				207.9099
47	1036800	11379602	555474.7	12351683	416605.9				208.3029
48	1036800	11380858	556605.6	12354918	417454.1				208.7271
49	1036800	11381486	557823.8	12357678	418367.7				209.1839
50	1036800	11381800	559131.6	12360281	419348.6				209.6743
51	1036800	11381957	560530.8	12362886	420398				210.199
52	1036800	11382036	562022.4	12365575	421516.8				210.7584
53	1036800	11382075	563607.4	12368387	422705.5				211.3527
54	1036800	11382094	565286.3	12371345	423964.7				211.9824
55	1036800	11382103	567059.9	12374458	425294.9				212.6475
56	1036800	11382109	568928.8	12377735	426696.6				213.3483
57	1036800	11382111	570893.5	12381174	428170.1				214.085
58	1036800	11382113	572954.4	12384783	429715.8				214.8579
59	1036800	11382114	575112.1	12388560	431334.1				215.667
60	1036800	11382114	577367.1	12392506	433025.3				216.5126

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
61	1036800	11382114	579719.8	12396624	434789.8				217.3949
62	1036800	11382114	582170.5	12400912	436627.9				218.3139
63	1036800	11382114	584719.8	12405374	438539.8				219.2699
64	1036800	11382114	587368.1	12410008	440526				220.263
65	1036800	11382114	590115.6	12414817	442586.7				221.2934
66	1036800	11382114	592962.9	12419799	444722.2				222.3611
67	1036800	11382114	595910.3	12424957	446932.7				223.4664
68	1036800	11382114	598958.1	12430291	449218.6				224.6093
69	1036800	11382114	602106.6	12435801	451580				225.79
70	1036800	11382114	605356.3	12441487	454017.3				227.0087
71	1036800	11382114	608707.5	12447353	456530.7				228.2654
72	1036800	11382114	612160.4	12453394	459120.4				229.5602
73	1036800	11382114	615715.5	12459617	461786.7				230.8934
74	1036800	11382114	626664.9	12478778	469998.7				234.9993
75	1036800	11382114	645292.4	12511375	483969.3				241.9846
76	1036800	11382114	671608.1	12557428	503706.1				251.853
77	1036800	11382114	705475.6	12616697	529106.8				264.5534
78	1036800	11382114	746553.1	12688582	559914.9				279.9575
79	1036800	11382114	794223.2	12772005	595667.6				297.8338
80	1036800	11382114	847529.4	12865290	635647.1				317.8236
81	1036800	11382114	905132.6	12966097	678849.6				339.4248
82	1036800	11382114	965306.5	13071400	723980.1				361.99
83	1036800	11382114	1025981	13177581	769485.9				384.743
84	1036800	11382114	1084840	13280584	813630.1				406.8151
85	1036800	11382114	1139465	13376178	854599.1				427.2995
86	1036800	11382114	1187515	13460264	890636.1				445.318
87	1036800	11382114	1226910	13529207	920182.9				460.0914
88	1036800	11382114	1256017	13580144	942013.1				471.0065
89	1036800	11382114	1273787	13611241	955340.1				477.67
90	1036800	11382114	1286383	13633284	964787.3				482.3936

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
91	1036800	11382114	1297484	13652711	973112.8				486.5564
92	1036800	11382114	1308221	13671501	981166.1				490.5831
93	1036800	11382114	1318979	13690327	989234.4				494.6172
94	1036800	11382114	1329879	13709402	997409.4				498.7047
95	1036800	11382114	1340960	13728794	1005720				502.8601
96	1036800	11382114	1352234	13748524	1014176				507.0878
97	1036800	11382114	1363705	13768596	1022778				511.3892
98	1036800	11382114	1375372	13789015	1031529				515.7646
99	1036800	11382114	1387237	13809779	1040428				520.2139
100	1036800	11382114	1399299	13830887	1049474				524.7372
101	1036800	11382114	1411558	13852340	1058669				529.3342
102	1036800	11382114	1424013	13874137	1068010				534.0049
103	1036800	11382114	1436664	13896276	1077498				538.749
104	1036800	11382114	1449511	13918757	1087133				543.5665
105	1036800	11382114	1462552	13941580	1096914				548.4572
106	1036800	11382114	1475789	13964745	1106842				553.4209
107	1036800	11382114	1489220	13988249	1116915				558.4575
108	1036800	11382114	1502844	14012091	1127133				563.5667
109	1036800	11382114	1516662	14036273	1137497				568.7485
110	1036800	11382114	1534084	14066761	1150563				575.2816
111	1036800	11382114	1552803	14099520	1164603				582.3013
112	1036800	11382114	1572115	14133314	1179086				589.543
113	1036800	11382114	1591782	14167733	1193837				596.9183
114	1036800	11382114	1611725	14202633	1208794				604.3969
115	1036800	11382114	1631915	14237964	1223936				611.9681
116	1036800	11382114	1652341	14273711	1239256				619.6281
117	1036800	11382114	1673000	14309864	1254751				627.3752
118	1036800	11382114	1693890	14346422	1270418				635.209
119	1036800	11382114	1715010	14383382	1286258				643.1288
120	1036800	11382114	1736357	14420739	1302268				651.1342

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
121	1036800	11382114	1757933	14458497	1318450				659.225
122	1036800	11382114	1779735	14496649	1334801				667.4006
123	1036800	11382114	1801762	14535198	1351322				675.6609
124	1036800	6324519	1735410	9361487	1301558				650.7789
125	1036800	3913685	1629777	6765795	1222333				611.1665
126	1036800	2697414	1549597	5409209	1162198				581.0991
127	1036800	2193238	1504050	4825326	1128038				564.0188
128	1036800	1998357	1483111	4593801	1112333				556.1666
129	1036800	1936334	1475911	4519178	1106933				553.4666
130	1036800	1931382	1475320	4513193	1106491				553.2453
131	1036800	1948372	1477349	4533733	1108012				554.0061
132	1036800	1970626	1479987	4560604	1109991				554.9954
133	1036800	1990784	1482355	4584905	1111767				555.8832
134	1036800	2006332	1484166	4603622	1113125				556.5623
135	1036800	2017133	1485415	4616611	1114062				557.031
136	1036800	2024026	1486210	4624893	1114658				557.3288
137	1036800	2028083	1486676	4629766	1115007				557.5036
138	1036800	2030264	1486926	4632385	1115195				557.5974
139	1036800	2031303	1487045	4633632	1115284				557.642
140	1036800	2031701	1487091	4634110	1115318				557.6592
141	1036800	2031777	1487099	4634202	1115325				557.6625
142	1036800	2031715	1487092	4634127	1115320				557.6598
143	1036800	2031612	1487080	4634003	1115311				557.6554
144	1036800	2031514	1487069	4633886	1115302				557.6512
145	1036800	2031436	1487060	4633792	1115296				557.6478
146	1036800	2031381	1487054	4633726	1115291				557.6454
147	1036800	2031346	1487050	4633684	1115288				557.6439
148	1036800	2031325	1487047	4633659	1115286				557.643
149	1036800	2031314	1487046	4633645	1115285				557.6425
150	1036800	2031309	1487045	4633639	1115285				557.6423

E.4 Scenario 4 Output Results

Time	"total base workstation 4 cost (cBW3)"	"total contractor 4 cost (cC4)"	"total employee 4 cost (cE4)"	"total optimized 4 cost (tc4)"	"total workstation 4 cost (cW4)"	"workstation 4 adjustment time (Wat4)"	"workstation 4 production exponent (ewp4)"	"workstation 4 special exponent (ews4)"	"Workstations 4 (W4)"
151	1036800	2031307	1487045	4633637	1115284				557.6422
152	1036800	2031307	1487045	4633636	1115284				557.6422
153	1036800	2031307	1487045	4633636	1115284				557.6422
154	1036800	2031307	1487045	4633637	1115284				557.6422
155	1036800	2031308	1487045	4633637	1115284				557.6422
156	1036800	2031308	1487045	4633638	1115284				557.6422
157	1036800	2031308	1487045	4633638	1115284				557.6422
158	1036800	2031308	1487045	4633638	1115284				557.6422
159	1036800	2031309	1487045	4633638	1115284				557.6422
160	1036800	2031309	1487045	4633638	1115284				557.6422