



RRID	YEAR	YARDOPS	YST	THY
5	1979	492.6200	881.2000	4408.3799
5	1980	424.1180	801.3000	3402.6399
5	1981	361.3040	807.5000	2901.5801
5	1982	284.3220	773.6000	2166.2400
5	1983	245.6110	755.7000	1958.6300
5	1984	233.0100	740.1000	1976.2900
5	1985	224.9920	683.3000	1813.8000
5	1986	216.5450	667.7000	1679.0800
5	1987	206.6440	649.4000	1653.3199
8	1979	51.8869	78.1000	547.0800
8	1980	44.0079	77.5000	400.7860
8	1981	42.2025	79.3000	399.4900
8	1982	38.0875	84.2000	351.6700
8	1983	35.3624	85.3000	319.7080
8	1984	37.5019	83.0000	359.6960
8	1985	33.0153	82.7000	387.5810
8	1986	35.8956	81.7000	359.4600
8	1987	31.4160	75.0000	320.2190
10	1979	221.5300	595.6000	2246.8701
10	1980	202.2850	591.8000	2013.5000
10	1981	201.0000	600.8000	1878.0500
10	1982	191.1270	608.5000	1695.1899
10	1983	178.2410	615.6000	1586.3300
10	1984	196.9980	612.7000	1619.3600
10	1985	207.4410	566.4000	1633.2500
10	1986	183.7740	567.6000	1621.8000
10	1987	189.6130	562.6000	1591.1801
18	1979	89.4183	214.5000	1077.3300
18	1980	84.0836	212.9000	968.7130
18	1981	81.1387	213.8000	856.0150
18	1982	72.7777	210.4000	683.6400
18	1983	57.6457	208.2000	574.5810
18	1984	59.3161	205.4000	556.3370
18	1985	54.8928	169.3000	502.5160
18	1986	41.6805	141.4000	392.1650
18	1987	35.3240	131.8000	325.7170
20	1979	429.0590	840.1000	4780.5898
20	1980	419.2310	835.9000	4433.8301
20	1981	415.7740	837.0000	3981.0701
20	1982	370.8270	829.1000	3074.8899
20	1983	320.1080	822.2000	2687.1599
20	1984	353.8650	814.9000	2856.3601
20	1985	332.5120	812.1000	2821.1299
20	1986	304.9630	781.5000	2493.5601
20	1987	209.5730	790.1000	2581.6799
21	1979	121.7790	276.2000	1459.4000
21	1980	121.7250	278.8000	1436.0800
21	1981	128.7620	287.3000	1330.8900
21	1982	116.6690	296.3000	991.3480
21	1983	99.5964	296.1000	887.0730

21	1984	96.2648	295.9000	895.7360
21	1985	91.4748	292.8000	762.7690
21	1986	87.6386	294.8000	691.0130
21	1987	84.2360	289.2000	696.5680
22	1979	265.1880	539.0000	2779.2200
22	1980	252.5220	536.3000	2510.0601
22	1981	241.7000	535.1000	2280.9700
22	1982	208.0150	533.6000	2306.6399
22	1983	183.5900	522.4000	1587.5800
22	1984	177.7530	517.8000	1545.9900
22	1985	168.4830	504.0000	1462.6200
22	1986	171.8510	488.6000	1480.3900
22	1987	177.1150	446.0000	1429.1700
23	1979	73.1974	189.6000	1035.0200
23	1980	71.2322	178.4000	987.1160
23	1981	68.8991	183.7000	891.6700
23	1982	59.7451	180.0000	704.8810
23	1983	52.3425	193.6000	706.8290
23	1984	52.4554	193.4000	670.6630
23	1985	50.2318	170.3000	606.7040
23	1986	48.7851	183.1000	582.3810
23	1987	41.7750	177.3000	541.1540
27	1979	19.1414	42.9000	211.7520
27	1980	19.8416	42.9000	194.8090
27	1981	21.7411	40.6000	188.5250
27	1982	10.2932	40.4000	151.7740
27	1983	14.1663	40.4000	135.4060
27	1984	15.7825	41.4000	64.3500
27	1985	14.4640	41.3000	112.8380
27	1986	13.6528	40.4000	100.6580
27	1987	15.1220	41.7000	98.6100
30	1979	20.2208	37.9000	323.2160
30	1980	18.7970	38.5000	324.4470
30	1981	18.7969	38.5000	283.4780
30	1982	18.0934	38.7000	239.6390
30	1983	14.6494	42.4000	259.8830
30	1984	14.0339	41.9000	261.1830
30	1985	12.8061	41.9000	218.2680
30	1986	11.8275	40.5000	206.9320
30	1987	11.9290	40.9000	202.9290
31	1979	17.7315	51.5000	225.7880
31	1980	18.7047	57.6000	245.7640
31	1981	19.9867	60.6000	238.2850
31	1982	16.7997	58.8000	187.8560
31	1983	18.5930	73.8000	198.2200
31	1984	19.4506	74.2000	204.0560
31	1985	18.4780	74.0000	191.3050
31	1986	18.7288	73.0000	183.8010
31	1987	18.1260	69.7000	178.2660
34	1979	18.0746	27.3000	236.8560
34	1980	22.7275	50.6000	208.6110
34	1981	31.2649	50.2000	188.0120
34	1982	26.8872	53.3000	137.6790
34	1983	26.2174	51.8000	141.9790
34	1984	29.6647	52.2000	133.5290
34	1985	31.9125	52.3000	104.0870
34	1986	19.6964	52.3000	191.4540
34	1987	19.6880	43.7000	249.5090
35	1979	77.7809	221.4000	923.4500
35	1980	67.0170	174.7000	696.6870

35	1981	61.3075	173.5000	635.6540
35	1982	49.8625	163.0000	551.4500
35	1983	46.6543	162.5000	514.9550
35	1984	51.8140	133.4000	524.0700
35	1985	45.8078	129.8000	437.7490
35	1986	45.4694	126.9000	430.1660
35	1987	40.1220	103.2000	429.0800
36	1979	191.9850	263.2000	1509.2600
36	1980	182.7360	263.2000	2170.8999
36	1981	179.3640	263.2000	1330.8400
36	1982	148.0640	258.6000	1069.1500
36	1983	129.8590	264.1000	1039.3600
36	1984	160.5290	265.0000	1047.2200
36	1985	157.4180	263.8000	918.9120
36	1986	128.9940	243.4000	970.8370
36	1987	109.7230	196.1000	842.6710
37	1979	263.9230	407.0000	2559.5100
37	1980	256.4700	406.4000	2361.8999
37	1981	230.6220	406.2000	2315.3899
37	1982	200.7520	406.7000	1510.7300
37	1983	178.5100	418.7000	1358.3199
37	1984	176.3790	442.5000	1200.8101
37	1985	169.4750	440.7000	958.0110
37	1986	136.1520	410.3000	1063.4200
37	1987	121.0840	400.6000	1132.8800

TABLE 1

CONRAIL INCLUDED

YARDOPS ACCOUNT

THE DATA ARE GIVEN IN THE FOLLOWING UNITS:

YARDOPS MILLIONS OF DOLLARS PER YEAR
 YST TENS OF MILES OF YARD SWITCHING TRACK
 THY MILLIONS OF TRAIN HOURS YARD SWITCHING

RAILROAD SPECIFIC MEANS OF THE DATA

RAILROAD	YARDOPS	YST	THY
5	298.7962	751.0889	2439.9955
8	38.8196	80.7556	382.0544
10	196.8343	591.2889	1765.0589
18	64.0308	189.7444	659.6682
20	350.6569	818.1000	3301.1411
21	105.3495	289.7111	1016.7641
22	205.1362	513.6444	1931.4044
23	57.6293	185.4889	747.3798
27	16.0228	41.3333	139.8680
30	15.6838	40.1333	257.7750
31	18.5110	65.9111	205.9268
34	25.1259	48.1889	176.8573
35	53.9817	154.2667	571.4734
36	154.2969	253.4000	1221.0166
37	192.5963	415.4556	1606.7745

OVERALL MEANS OF THE DATA

119.5647	295.9007	1094.9306
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OLS REGRESSION RESULTS FOR POOLED MODEL

COEFFICIENT	ESTIMATE	T-RATIO
CONST	-4.3487	-1.6659
YST	0.1347	6.9816
THY	0.0768	15.0098
TIME	0.2734	0.3433

ERROR VARIANCE	388.0046
RSQ	0.9691
MODIFIED DW	0.7968
MODIFIED RHO	0.6016

F-STATISTIC FOR POOLING RAILROADS: $F(56, 75) = 6.57$

F-STATISTIC FOR POOLING YEARS: $F(24, 108) = 0.98$

OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND TIME TREND

ERROR VARIANCE	221.9924
RSQ	0.9842
MODIFIED DW	1.5729
MODIFIED RHO	0.2136

F-STATISTIC FOR POOLING RAILROADS
IN THE FIXED EFFECTS MODEL: $F(42, 75) = 3.60$

OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME TREND

COEFFICIENT	ESTIMATE	T-RATIO
YST	0.3276	5.2246
THY	0.0687	14.9378
TIME	0.3214	0.4797
F5	-114.9091	-2.6051
F8	-13.9417	-2.0496
F10	-118.1461	-3.3766
F18	-43.4545	-3.5898
F20	-144.1715	-3.0304
F21	-59.4205	-3.3828
F22	-95.8386	-3.1737
F23	-54.4887	-4.6091
F27	-7.1282	-1.2915
F30	-15.1757	-2.7699
F31	-17.2304	-2.7412
F34	-2.8125	-0.4934
F35	-35.8214	-3.4992
F36	-12.6126	-0.8188
F37	-53.9069	-2.1937
ERROR VARIANCE		221.9924
RSQ		0.9842
MODIFIED DW		1.5729
MODIFIED RHO		0.2136
BREUSCH-PAGAN		183.9319
RESET		7.9730
		CHI-SQ(17)
		F(3 114)

OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND NO TIME TREND

F-STATISTIC FOR TIME TREND: F(1 117) = 0.23

F-STATISTIC FOR TIME TREND: F(1 117) = 0.23

OLS REGRESSION ON MODEL WITH RAILROAD EFFECTS AND TIME EFFECTS

F-STATISTIC FOR TIME EFFECTS: $F(8, 110) = 0.93$

F-STATISTIC FOR TIME EFFECTS: $F(8, 110) = 0.93$

OLS REGRESSION MODEL WITH RAILROAD EFFECTS AND TIME EFFECTS
STEP ONE IN GLS ESTIMATION

COEFFICIENT	ESTIMATE	T-RATIO
YST	0.2914	4.1678
THY	0.0715	13.6078
F5	-99.6095	-2.0882
F8	-17.2188	-2.0285
F10	106.7654	-2.8085
F18	-43.5520	-3.1747
F20	-128.8247	-2.5224
F21	-56.8866	-2.9315
F22	-87.7209	-2.6808
F23	-54.9824	-4.0876
F27	-11.1609	-1.5596
F30	-13.5774	-2.6861
F31	-20.5561	-2.6130
F34	6.6997	-0.9120
F35	-36.9592	-3.1268
F36	-11.9566	-0.6974
F37	-48.4519	-1.8107
T79	BASE YEAR	
T80	2.2419	0.4096
T81	7.5293	1.3366
T82	7.3851	1.2132
T83	1.8603	0.2898
T84	7.7211	1.2082
T85	11.6011	1.7976
T86	6.9691	1.0717
T87	0.9719	0.1477
ERROR VARIANCE		221.6143
RSQ		0.9852
MODIFIED DW		1.5654
MODIFIED RHO		0.2173

FIXED-EFFECTS MODEL CORRECTED FOR AUTOCORRELATION:
STEP TWO OF GLS ESTIMATION

COEFFICIENT	ESTIMATE	ASY Z-PATIO
YST	0.2425	3.8778
THY	0.0664	10.9410
F5	-42.8293	-1.3493
F8	-10.8471	-1.4151
F10	-56.8505	-2.1868
F18	-26.3632	-2.4457
F20	-61.7747	1.8723
F21	-31.8836	-2.2405
F22	-43.6820	-1.9795
F23	-35.5637	-3.3632
F27	-8.4086	-1.2279
F30	-14.8037	-2.1523
F31	14.7691	-2.0084
F34	-4.6549	-0.6671
F35	-22.7820	-2.3663
F36	3.4539	0.2770
F37	-18.7092	-1.0126
T79	BASE YEAR	
T80	6.3229	1.1220
T81	10.5655	1.8969
T82	8.0064	1.3637
T83	2.2564	0.3756
T84	9.3009	1.5607
T85	11.0566	1.8015
T86	5.1167	0.8207
T87	-0.3628	-0.0570
ERROR VARIANCE		179.3713
RSQ		0.9785
MODIFIED DW		1.8255
MODIFIED RHO		0.0872

WEIGHTED LEAST-SQUARES ESTIMATES OF FIXED-EFFECTS MODEL:
STEP THREE OF GLS ESTIMATION

YST	0.1576	3.9349
THY	0.0538	10.3249
F5	2.1357	1.7592
F8	1.1412	1.5337
F10	0.9742	0.5804
F18	0.1522	0.1337
F20	1.3420	1.3863
F21	1.0070	0.6306
F22	1.4681	1.1975
F23	-2.1892	-1.3620
F27	0.6825	1.1682
F30	0.6299	-0.9239
F31	-0.2388	-0.3189
F34	1.8580	2.8449
F35	0.2367	0.2759
F36	2.5109	3.4479
F37	2.4608	2.3548

T79	BASE	YEAR
T80	0.1612	-0.4250
T81	0.2540	0.6451
T82	-0.2113	-0.4736
T83	-0.8545	-1.8689
T84	-0.2181	-0.4781
T85	0.1464	-0.3051
T86	-0.7857	-1.6172
T87	-0.9991	-2.0120

ERROR VARIANCE	0.7205	
RSQ	0.9630	
MODIFIED DW	1.5806	
MODIFIED RHO	0.2097	
BREUSCH-PAGAN	75.8081	CHI-SQ(24)
RESET	6.1638	F(3 107)

COEFFICIENT	ESTIMATE	ASY Z-RATIO
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5	2.1357	1.7592
8	1.1412	1.5037
10	0.9742	0.5804
18	0.1522	0.1337
20	1.3420	1.3863
21	1.0070	0.6306
27	1.4681	1.1975
23	-2.1892	-1.3620
27	0.6825	1.1682
30	-0.6299	-0.9239
31	-0.2388	-0.3189
34	1.8580	2.8449
35	0.2367	0.2759
36	2.5109	3.4479
37	2.4608	2.3548

1979	-0.1612	-0.4250
1980	0.2540	0.6451
1981	0.2113	-0.4736
1982	-0.8545	-1.8689
1983	-0.2181	-0.4781
1984	-0.1464	-0.3051
1985	-0.7857	-1.6172
1986	-0.9991	-2.0120

ERROR VARIANCE	0.7205
RSQ	0.9630
MODIFIED DW	1.5806
MODIFIED BHO	0.2097

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[illegible]

TABLE 11

CONRAIL INCLUDED

YARDOPS ACCOUNT

RAILROAD	RATIO	SE
5	0.53	0.0783
8	0.62	0.0741
10	0.50	0.0785
18	0.54	0.0780
20	0.58	0.0765
21	0.55	0.0779
22	0.56	0.0773
23	0.58	0.0766
27	0.54	0.0781
30	0.69	0.0676
31	0.52	0.0785
34	0.56	0.0775
35	0.56	0.0775
36	0.62	0.0739
37	0.57	0.0770

MEAN OF RATIOS: 0.5669

RATIO AT OVERALL MEAN: 0.5582 SE: 0.0775