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This Web Supplement consists of several tables referenced in our published article. They are organized in two sets, the first set related to technology choice at new plants and the second set related to investment spending at existing plants. Variable names correspond to those in the published article, with new variables described at the bottom of each table.

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Note:
Set A based on technology data taken from Lockwood Directory
Set B based on LRD data, estimated at Census bureau (results screened to avoid disclosure)

Table A1
Technology Choice
Single Regulatory Stringency Measures
With Population Growth
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-6.9278	12.4199
FOREST	.0413499	.0119654
ENERGY	.2582101	.319378
POPGROW	-.0252253	.0248314
VOTE	-.0446172	.0120654
BORN7195	-.8275782	.424158
FINE	.4257788	.6281571
TISSUE	-2.99106	1.182342
BOX	.9039627	.4422135
CONSTANT	.6750893	.68611
SULF		
POPDEN	-.0129254	.0285126
FOREST	.067471	.0161191
ENERGY	.4419595	.5991196
POPGROW	-.0666863	.0470509
VOTE	-.0444917	.0201801
BORN7195	-.1817034	.7037756
FINE	.6340423	1.283356
TISSUE	-	
BOX	2.005234	.7623835
CONSTANT	-1.690069	1.204953
MECH		
POPDEN	-1.696	5.4956
FOREST	.0415651	.0127227
ENERGY	.3008239	.2042792
POPGROW	-.0210675	.0290186
VOTE	-.0480702	.014146
BORN7195	-1.072748	.5100286
FINE	-.8761398	.8684933
TISSUE	-3.219835	1.190505
BOX	-.6262378	.5884727
CONSTANT	.9052193	.764674
DEINK		
POPDEN	.208	11.3182
FOREST	-.0197151	.0235816
ENERGY	.0252561	.3376584
POPGROW	.0415051	.0356199
VOTE	.0107246	.0185932
BORN7195	1.186423	.7415317
FINE	-	
TISSUE	1.089002	.6537165
BOX	-	
CONSTANT	-3.693913	1.345217

Log Likelihood = -225.05707

Table A2
Technology Choice
Multiple Regulatory Stringency Measures
With Population Growth
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-3.7441	7.9442
FOREST	.0479155	.0143499
ENERGY	.1938431	.2546824
POPGROW	-.0308557	.0276659
REGAIR	-.3381228	.2674239
REGWATER	-.8590911	.2514144
BORN7195	-.4455186	.4817924
FINE	.7173533	.6747756
TISSUE	-3.238076	1.184468
BOX	.9313315	.4911173
CONSTANT	6.767227	1.499253
SULF		
POPDEN	-15.0159	32.4674
FOREST	.0782771	.0224048
ENERGY	.4897611	.6718948
POPGROW	-.0657655	.048631
REGAIR	.1159931	.4443532
REGWATER	-.6934083	.4140362
BORN7195	-.271827	.7221947
FINE	.532096	1.266431
TISSUE	-	
BOX	2.15605	.7738483
CONSTANT	1.06115	2.504444
MECH		
POPDEN	-.1991	4.9276
FOREST	.0295517	.0146614
ENERGY	.2433378	.2033241
POPGROW	-.0243229	.0287394
REGAIR	-.8567534	.3102824
REGWATER	-.2894814	.2775427
BORN7195	-.5143571	.5607072
FINE	-.6281735	.8839534
TISSUE	-3.520984	1.191609
BOX	-.6530787	.6319339
CONSTANT	5.38995	1.609005
DEINK		
POPDEN	-1.044	13.4294
FOREST	-.0248411	.026972
ENERGY	.0664437	.3900281
POPGROW	.0424687	.0374084
REGAIR	.1350941	.4290557
REGWATER	.255855	.410121
BORN7195	1.117435	.7674508
FINE	-	
TISSUE	1.248323	.678666
BOX	-	
CONSTANT	-6.003426	2.656451

Log Likelihood = -208.30087

Table A3
First Stage Cross-State Regressions
Generating REGAIR and REGWATER
(N=48, standard errors)

Dep Var:	AIR	WATER
VOTE	0.018	0.022
	(0.025)	(0.023)
CONVMEMB	0.113	0.261
	(0.142)	(0.135)
POPDEN	2.050	0.390
	(2.002)	(1.781)
DIRTYAIR	0.072	
	(0.028)	
DIRTYWATER		0.035
		(0.243)
VOTEDEM	-3.647	-1.680
	(3.744)	(3.475)
CONSTANT	2.674	4.423
	(2.453)	(2.358)
R^2	0.295	0.252

AIR - air pollution stringency index (Ringquist)
WATER - water pollution stringency index (Ringquist)
CONVMEMB - membership rate in 3 conservation organizations (Hall and Kerr)
DIRTYAIR - index of air pollution problems (Hall and Kerr)
DIRTYWATER - index of water pollution problems (Hall and Kerr)
VOTEDEM - percent voting Democratic in latest Congressional election

Table A4
Technology Choice
Alternative Regulatory Stringency Measures
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
ENVPOLICY	-1.57393	.3251576
POPDEN	-5.7227	9.1855
FOREST	.0574766	.0125722
ENERGY	.2845114	.2734482
BORN7195	-1.077533	.4369071
FINE	.2260102	.6465238
TISSUE	-3.014491	1.180377
BOX	.773914	.4571204
CONSTANT	-4.873053	.8872023
SULF		
ENVPOLICY	-1.251211	.5339377
POPDEN	-17.2544	31.6538
FOREST	.0725496	.0165857
ENERGY	.5826989	.6528643
BORN7195	-.4046183	.686153
FINE	.4094907	1.25865
TISSUE	-	
BOX	1.83156	.7568262
CONSTANT	-6.78477	1.569528
MECH		
ENVPOLICY	-1.410542	.3624711
POPDEN	-2.6091	4.9663
FOREST	.055127	.0132568
ENERGY	.3601983	.2043027
BORN7195	-1.304535	.5167435
FINE	-1.105071	.8744885
TISSUE	-3.195901	1.18318
BOX	-.7168741	.5934227
CONSTANT	-4.295627	.9485735
DEINK		
ENVPOLICY	.2661126	.5002715
POPDEN	.8758	10.2907
FOREST	-.0106324	.0210073
ENERGY	.0016534	.3194588
BORN7195	1.192371	.7495339
FINE	-	
TISSUE	1.067318	.6505775
BOX	-	
CONSTANT	-2.333995	1.167357

LOG-L = -218.97436

ENVPOLICY = -1*Green Policies Index (Hall and Kerr)
(negative sign added, since original index has lower values = stricter)

Table A4 (cont.)

tech	Coef.	Std. Err.
KRAFT		
REGSPEND	-.0597137	.017587
POPDEN	-7.0467	10.8997
FOREST	.068011	.0152391
ENERGY	.2752913	.2894044
BORN7195	-1.114663	.4209145
FINE	.0217997	.5945124
TISSUE	-2.928899	1.139834
BOX	1.048712	.4437666
CONSTANT	-.2921563	.482233
SULF		
REGSPEND	-.0330054	.0274498
POPDEN	-21.0519	29.871
FOREST	.0730664	.0211835
ENERGY	.6109315	.612631
BORN7195	-.3834991	.67433
FINE	.1992653	1.238537
TISSUE	-	
BOX	2.039069	.7533008
CONSTANT	-3.428071	.9627935
MECH		
REGSPEND	-.0453872	.019098
POPDEN	-3.484	5.7564
FOREST	.0596183	.0160882
ENERGY	.328684	.2056236
BORN7195	-1.314325	.5063479
FINE	-1.281079	.8270322
TISSUE	-3.122942	1.145792
BOX	-.490004	.5782571
CONSTANT	-.3186312	.5211394
DEINK		
REGSPEND	.0522808	.0231886
POPDEN	2.076	12.7081
FOREST	-.034459	.0234536
ENERGY	-.0137328	.3711961
BORN7195	1.543933	.8149172
FINE	-	
TISSUE	1.425136	.7316734
BOX	-	
CONSTANT	-4.456887	1.196714

LOG-L = -225.75577

REGSPEND = 1988 per-capita state spending on environmental programs (Hall and Kerr)

Table A4 (cont.)

tech	Coef.	Std. Err.
KRAFT		
CONVMEMB	-.4094533	.0747362
POPDEN	-4.3891	8.1753
FOREST	.0647106	.0132489
ENERGY	.2252748	.2579103
BORN7195	-1.043822	.4573715
FINE	.9984267	.7197948
TISSUE	-3.00071	1.191791
BOX	.7692704	.4772373
CONSTANT	1.243129	.6092858
SULF		
CONVMEMB	-.2304286	.1066137
POPDEN	-20.6786	31.3381
FOREST	.0717109	.0165943
ENERGY	.6119755	.6459116
BORN7195	-.3206189	.6866021
FINE	.9991266	1.290394
TISSUE	-	
BOX	1.914105	.7598925
CONSTANT	-2.474413	1.080411
MECH		
CONVMEMB	-.2968973	.0776679
POPDEN	-2.5115	5.0628
FOREST	.0558367	.0134626
ENERGY	.3229151	.2018038
BORN7195	-1.297315	.5212534
FINE	-.5343148	.8858137
TISSUE	-3.211394	1.19279
BOX	-.6971834	.5978274
CONSTANT	.8772703	.6592543
DEINK		
CONVMEMB	.0840353	.1054734
POPDEN	.4696	10.0426
FOREST	-.0135978	.022178
ENERGY	.0295151	.3136771
BORN7195	1.250214	.7458199
FINE	-	
TISSUE	1.053252	.6451606
BOX	-	
CONSTANT	-3.566128	1.234176

LOG-L = -213.69817

CONVMEMB - membership rate in 3 conservation organizations (Hall and Kerr)

Table A5
Technology Choice
Alternative Regulatory Stringency Measures
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-8.7455	13.1939
FOREST	.0399411	.0128161
ENERGY	.2701912	.3257518
DIRTYAIR	.0089787	.01908
DIRTYWATER	.0179641	.0198916
BORN7192	-.9616417	.4030409
FINE	.0818323	.5934843
TISSUE	-2.66655	1.173567
BOX	.8824596	.4293815
CONSTANT	-2.254157	.9467649
SULF		
POPDEN	-20.5296	32.9026
FOREST	.0697813	.0199159
ENERGY	.5825256	.670538
DIRTYAIR	.035812	.0351652
DIRTYWATER	.0111162	.0347999
BORN7192	-.3204239	.6730886
FINE	.2684257	1.263248
TISSUE	-	
BOX	1.94413	.7500717
CONSTANT	-5.869396	1.969602
MECH		
POPDEN	-2.6133	5.8876
FOREST	.0248024	.0133768
ENERGY	.2626051	.2048806
DIRTYAIR	-.0361922	.0233868
DIRTYWATER	.0266603	.0235754
BORN7192	-1.086532	.4920413
FINE	-1.215404	.8379761
TISSUE	-2.936794	1.176634
BOX	-.659924	.5854507
CONSTANT	-.730836	.9939212
DEINK		
POPDEN	3.2142	12.6505
FOREST	.002852	.021563
ENERGY	-.0801475	.3690732
DIRTYAIR	.0011662	.0312874
DIRTYWATER	.0520911	.0327722
BORN7192	1.106884	.7481936
FINE	-	
TISSUE	1.337009	.6990799
BOX	-	
CONSTANT	-4.603282	1.705671

Log Likelihood = -233.88077

DIRTYAIR - index of air pollution problems (Hall and Kerr)
DIRTYWATER - index of water pollution problems (Hall and Kerr)

Table A5 (cont.)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-3.2221	10.0417
FOREST	.0318059	.012045
ENERGY	.1949874	.2773184
OZONE	-.0350904	.0080868
SDWA	-.0329955	.0287146
BORN7192	-1.067508	.4321897
FINE	-.1201268	.6386346
TISSUE	-3.445454	1.255279
BOX	.9079373	.4491753
CONSTANT	.8838367	.6932676
SULF		
POPDEN	-26.6522	31.9479
FOREST	.0575358	.015677
ENERGY	.7374993	.6536925
OZONE	-.0233373	.0137121
SDWA	-.0470072	.0496151
BORN7192	-.340705	.6883729
FINE	.1441446	1.261985
TISSUE	-	
BOX	1.915134	.7405736
CONSTANT	-2.389616	1.271556
MECH		
POPDEN	1.0041	4.5508
FOREST	.0261939	.0126532
ENERGY	.2489786	.2035145
OZONE	-.0385864	.0089096
SDWA	.0158925	.0156513
BORN7192	-1.338025	.5403621
FINE	-1.418437	.8979329
TISSUE	-3.400545	1.226647
BOX	-.5011849	.6073117
CONSTANT	.6941491	.6581243
DEINK		
POPDEN	-.4626	11.93
FOREST	.0028322	.0217275
ENERGY	.0780796	.3608612
OZONE	.0097428	.0119554
SDWA	.0297357	.0150613
BORN7192	1.518208	.8373733
FINE	-	
TISSUE	1.117889	.6917026
BOX	-	
CONSTANT	-4.344021	1.308738

Log Likelihood = -213.96851

OZONE = Percent of population in areas not meeting ozone air quality
SDWA = Percent of population with water quality not meeting SDWA tests
(both taken from Hall and Kerr(1991))

Table A6
Technology Choice
Single Regulatory Stringency Measures
Without Product Controls
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-7.1352	13.3981
FOREST	.0225539	.0090666
ENERGY	.2101136	.3304751
VOTE	-.039047	.0104893
BORN7195	-.5844429	.3891547
CONSTANT	.5034192	.4919588
SULF		
POPDEN	-13.3788	26.2786
FOREST	.0397908	.0118809
ENERGY	.366304	.5504892
VOTE	-.0395494	.0183338
BORN7195	.1662157	.6458328
CONSTANT	-1.607552	.8398284
MECH		
POPDEN	-3.044	6.018
FOREST	.0278071	.0098612
ENERGY	.2993124	.2049185
VOTE	-.0410183	.0127843
BORN7195	-.6644379	.4774451
CONSTANT	-.0422049	.576157
DEINK		
POPDEN	-3.5847	6.0866
FOREST	-.0029675	.0195937
ENERGY	.1920216	.2276626
VOTE	-.0046901	.0159052
BORN7195	1.021152	.7099499
CONSTANT	-2.703462	.9790963

Log Likelihood = -256.00349

Table A7
Technology Choice
Multiple Regulatory Stringency Measures
Without Product Controls
Multinomial Logit (N=227)

tech	Coef.	Std. Err.
KRAFT		
POPDEN	-3.2739	9.2154
FOREST	.0291785	.0116636
ENERGY	.1203069	.2609715
REGAIR	-.1817411	.2367887
REGWATER	-.8194844	.235121
BORN7195	-.3084983	.4338902
CONSTANT	5.714475	1.24036
SULF		
POPDEN	-13.811	28.3682
FOREST	.0468445	.0172061
ENERGY	.3720977	.5858971
REGAIR	.1286476	.4020481
REGWATER	-.6056936	.3686247
BORN7195	.0797543	.6886294
CONSTANT	.7244853	2.075191
MECH		
POPDEN	-1.7015	5.5334
FOREST	.0179831	.0123418
ENERGY	.2464761	.198457
REGAIR	-.6452411	.2719755
REGWATER	-.2879245	.2591869
BORN7195	-.2058303	.5138118
CONSTANT	3.607696	1.377408
DEINK		
POPDEN	-4.3101	6.5601
FOREST	-.0034477	.0221526
ENERGY	.2132821	.2396393
REGAIR	.0232431	.3482768
REGWATER	.0639656	.3378828
BORN7195	.976468	.7202973
CONSTANT	-3.565734	2.274828

Log Likelihood = -241.70008

Table B1
Investment Models with Gross Cash Flow
Total Investment Spending
(Full Sample, N=1392)

	(1)	(2)	(3)	(4)	(5)	(6)
VOTE		-46.55	-35.76	-38.08	-47.55	-7.490
		(25.80)	(26.36)	(44.15)	(26.16)	(36.15)
pQ/c_{t-1}	0.232	0.227	0.225	0.232	0.220	0.074
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
pQ/c_{t-2}	0.082	0.079	0.072	0.065	0.080	-0.098
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
K_{t-1}	0.041	0.037	0.021	0.020	0.037	-0.159
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
$CASH_{t-1}$	76916	79034	75967	73748	79456	61180
	(96790)	(96670)	(96620)	(96820)	(96780)	(90950)
$CASH_{t-2}$	-25116	-27055	-27308	-24576	-29781	-40622
	(93610)	(93490)	(93430)	(93710)	(93640)	(88700)
KRAFT			+	+		
SULF			+	+		
MECH			+	-		
DEINK			+	-		
KRAFT*VOTE				-		
SULF*VOTE				-		
MECH*VOTE				+		
DEINK*VOTE				+		
BOX					+	
FINE					-	
NEWS					-	
TISSUE					+	

Table B1 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
1980	308.68	408.93	430.91	432.44	411.11	727.74
	(1060)	(1059)	(1059)	(1062)	(1061)	(1042)
1981	1023.6	1159.1	1190.9	1137.3	1173.4	1796.2
	(1240)	(1241)	(1240)	(1245)	(1242)	(1186)
1982	13.643	411.66	405.63	351.74	420.99	1405.6
	(1423)	(1441)	(1440)	(1452)	(1442)	(1365)
1983	-1718	-1298	-1305	-1329	-1297	-243.9
	(1652)	(1669)	(1668)	(1674)	(1671)	(1556)
1984	-527.6	-71.08	-84.57	-76.81	-104.4	439.85
	(1774)	(1792)	(1791)	(1799)	(1794)	(1661)
1985	1198.4	1507.0	1511.9	1539.5	1477.3	1848.7
	(1638)	(1647)	(1645)	(1651)	(1649)	(1513)
1986	801.04	1049.3	1055.7	1085.3	1012.8	1061.8
	(1634)	(1640)	(1638)	(1644)	(1642)	(1486)
1987	1196.6	1670.0	1647.3	1626.2	1652.3	1234.7
	(1738)	(1758)	(1756)	(1763)	(1760)	(1563)
1988	2322.8	2791.2	2762.0	2740.2	2766.2	2164.1
	(1691)	(1711)	(1709)	(1716)	(1713)	(1530)
1989	3743.1	4306.2	4270.3	4263.7	4308.0	3968.6
	(1561)	(1591)	(1590)	(1595)	(1594)	(1446)
1990	2834.5	3423.9	3414.6	3400.5	3443.9	3910.6
	(1416)	(1452)	(1452)	(1457)	(1454)	(1322)
FIRM	X	X	X	X	X	
PLANT						X
AR(1)	0.338	0.342	0.341	0.341	0.341	0.281
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.342	0.344	0.347	0.347	0.345	0.420

(technology and product dummy coefficients suppressed, but not significant)

Table B2
Investment Models with Gross Cash Flow
Productive Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-17141		-19062	-9546		-11316
	(6806)		(6751)	(3910)		(3855)
ABATEYR		2082.5	2370.4		2130.1	2427.1
		(862.00)	(864.30)		(829.40)	(833.30)
pQ/c_{t-1}	0.302	0.293	0.280	0.406	0.388	0.388
	(0.16)	(0.16)	(0.16)	(0.15)	(0.15)	(0.14)
pQ/c_{t-2}	-0.004	-0.063	-0.017	-0.041	-0.058	-0.046
	(0.16)	(0.16)	(0.16)	(0.15)	(0.15)	(0.15)
K_{t-1}	0.057	0.044	0.051	0.033	0.029	0.028
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
$CASH_{t-1}$	84018	82305	83555	92665	111300	
	(119600)	(119800)	(119200)	(102400)	(102400)	
$CASH_{t-2}$	31909	34511	26681	48233	59532	
	(117400)	(117600)	(117000)	(98930)	(98970)	
1980	-829.5	-767.6	-782.9	-778.0	-771.2	-555.1
	(1427)	(1436)	(1427)	(1400)	(1406)	(1352)
1981	-1351	-1041	-1017	-1290	-951.6	-1248
	(1606)	(1612)	(1604)	(1594)	(1598)	(1532)
1982	-1519	-1099	-1149	-1239	-740.4	-1539
	(1782)	(1783)	(1776)	(1681)	(1683)	(1582)
1983	-2631	-2251	-2381	-2160	-1663	-3016
	(2043)	(2038)	(2031)	(1817)	(1813)	(1579)
1984	-686.1	-391.8	-530.9	-56.45	388.04	-1047
	(2185)	(2178)	(2171)	(1895)	(1887)	(1585)
1985	829.61	1050.5	979.26	1371.3	1742.8	626.59
	(2007)	(2001)	(1993)	(1803)	(1797)	(1585)

Table B2 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
1986	103.50	370.05	302.17	619.87	1047.0	-84.21
	(1995)	(1990)	(1982)	(1786)	(1781)	(1609)
1987	-482.3	-889.0	-905.7	105.86	11.255	-1278
	(2119)	(2117)	(2109)	(1817)	(1810)	(1613)
1988	1467.3	1348.0	1380.7	2020.1	2212.3	1061.9
	(2096)	(2090)	(2082)	(1800)	(1792)	(1599)
1989	2933.8	2625.4	2676.8	3114.3	3092.0	2220.5
	(1959)	(1960)	(1952)	(1751)	(1749)	(1617)
1990	1240.9	924.42	895.63	1519.7	1434.8	377.20
	(1768)	(1776)	(1767)	(1506)	(1510)	(1367)
FIRM	X	X	X			
AR(1)	0.244	0.229	0.232	0.285	0.274	0.270
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.308	0.307	0.314	0.272	0.273	0.278

Table B3
Investment Models with Gross Cash Flow
Productive Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)
ABATEAVG		-18187	-19404	-20551	-18889
		(6822)	(7206)	(7351)	(6896)
ABATEYR		2355.1	2299.0	2334.3	2348.3
		(863.10)	(865.00)	(866.80)	(866.30)
VOTE	-59.95	-50.84	-48.48	21.452	-61.46
	(34.17)	(33.95)	(34.21)	(71.09)	(35.00)
pQ/c_{t-1}	0.303	0.274	0.273	0.288	0.283
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
pQ/c_{t-2}	-0.059	-0.029	-0.038	-0.037	-0.013
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
K_{t-1}	0.046	0.047	0.035	0.039	0.038
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
$CASH_{t-1}$	89064	88892	88095	83232	85532
	(119900)	(119100)	(119200)	(120000)	(119000)
$CASH_{t-2}$	36633	25549	24890	35875	20475
	(117600)	(116900)	(117000)	(118000)	(116800)
KRAFT			+	+	
SULF			+	+	
MECH			-	-	
DEINK			-	-	
KRAFT*VOTE				-	
SULF*VOTE				-	
MECH*VOTE				+	
DEINK*VOTE				+	

Table B3 (cont.)

	(1)	(2)	(3)	(4)	(5)
BOX					+
FINE					+
NEWS					-
TISSUE					-
1980	-693.1	-683.3	-650.3	-633.2	-623.0
	(1430)	(1424)	(1425)	(1429)	(1424)
1981	-1144	-856.2	-800.6	-1001	-788.9
	(1612)	(1606)	(1609)	(1627)	(1605)
1982	-862.3	-663.7	-596.3	-781.3	-585.7
	(1816)	(1806)	(1810)	(1831)	(1807)
1983	-1912	-1887	-1811	-1877	-1844
	(2073)	(2059)	(2063)	(2074)	(2059)
1984	32.195	-35.25	24.668	22.630	24.737
	(2215)	(2197)	(2202)	(2217)	(2198)
1985	1285.0	1300.5	1360.8	1474.9	1366.2
	(2023)	(2006)	(2011)	(2020)	(2007)
1986	467.84	546.27	600.01	661.38	617.11
	(2006)	(1990)	(1995)	(2004)	(1993)
1987	75.116	-402.9	-384.6	-330.9	-211.6
	(2151)	(2137)	(2144)	(2157)	(2144)
1988	1993.5	1860.7	1859.5	1922.2	2031.1
	(2126)	(2107)	(2114)	(2127)	(2113)
1989	3514.8	3229.8	3234.7	3349.7	3396.0
	(1999)	(1986)	(1991)	(1999)	(1988)
1990	1904.4	1469.4	1534.0	1541.1	1564.0
	(1813)	(1806)	(1811)	(1816)	(1806)
FIRM	X	X	X	X	X
AR(1)	0.246	0.238	0.240	0.239	0.238
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.305	0.316	0.318	0.320	0.321

(technology and product dummy coefficients suppressed, but not significant)

Table B4
Investment - Cooper Model with Lagged Investment
Total Investment Rate (INVEST/K)
(Full Sample, N=1392)

	(1)	(2)	(3)	(4)	(5)	(6)
VOTE		-0.014	-0.001	-0.026	-0.015	-0.018
		(0.03)	(0.03)	(0.06)	(0.03)	(0.06)
INVDUM-1	0.142	0.142	0.141	0.141	0.139	0.125
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-2	-0.012	-0.012	-0.013	-0.012	-0.015	-0.027
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-3	0.037	0.037	0.037	0.037	0.035	0.022
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-4	-0.004	-0.004	-0.004	-0.004	-0.006	-0.018
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-5	0.006	0.005	0.005	0.005	0.003	-0.009
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-6	-0.010	-0.010	-0.010	-0.010	-0.011	-0.023
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-7	-0.027	-0.027	-0.028	-0.028	-0.030	-0.048
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
KRAFT			+	-		
SULF			+	-		
MECH			+	+		
DEINK			+	+		
KRAFT*VOTE				+		
SULF*VOTE				+		
MECH*VOTE				-		
DEINK*VOTE				-		

Table B4 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
BOX					+	
FINE					-	
NEWS					-	
TISSUE					+	
1980	-0.001	-0.001	-0.001	-0.001	-0.001	0.004
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1981	-0.014	-0.013	-0.013	-0.013	-0.013	-0.007
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1982	-0.027	-0.026	-0.027	-0.026	-0.025	-0.016
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1983	-0.053	-0.052	-0.053	-0.052	-0.052	-0.043
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1984	-0.019	-0.018	-0.019	-0.019	-0.018	-0.013
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1985	0.022	0.023	0.022	0.022	0.023	0.028
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1986	-0.010	-0.009	-0.010	-0.010	-0.009	-0.002
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1987	0.015	0.016	0.015	0.015	0.017	0.028
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1988	0.024	0.026	0.024	0.025	0.026	0.035
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1989	0.026	0.027	0.026	0.026	0.028	0.041
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1990	0.010	0.012	0.011	0.011	0.014	0.027
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
FIRM	X	X	X	X	X	
PLANT						X
R^2	0.264	0.264	0.266	0.267	0.269	0.299

INVDUM= dummy for investment spending in year>.2*plant’s capital stock

(technology and product dummy coefficients suppressed, but not significant)

Table B5
Investment - Cooper Model with Lagged Investment
Productive Investment Rate (PRODINV/K)
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-0.200		-0.252	-0.128		-0.154
	(0.08)		(0.08)	(0.05)		(0.05)
ABATEYR		0.026	0.034		0.024	0.031
		(0.01)	(0.01)		(0.01)	(0.01)
INVDUM-1	0.081	0.086	0.081	0.084	0.084	0.084
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INVDUM-2	-0.048	-0.047	-0.049	-0.031	-0.031	-0.033
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-3	0.028	0.030	0.027	0.042	0.043	0.040
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-4	-0.011	-0.007	-0.010	0.005	0.008	0.005
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-5	0.005	0.009	0.005	0.018	0.020	0.017
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-6	-0.016	-0.014	-0.019	-0.003	-0.004	-0.006
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-7	-0.023	-0.019	-0.023	-0.014	-0.013	-0.014
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)

Table B5 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
1980	-0.009	-0.009	-0.009	-0.010	-0.009	-0.009
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1981	-0.034	-0.031	-0.029	-0.035	-0.032	-0.031
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1982	-0.032	-0.029	-0.027	-0.031	-0.028	-0.026
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1983	-0.053	-0.051	-0.050	-0.052	-0.050	-0.049
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1984	-0.020	-0.019	-0.018	-0.019	-0.017	-0.016
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1985	0.011	0.013	0.014	0.014	0.015	0.016
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1986	-0.028	-0.026	-0.024	-0.029	-0.026	-0.025
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1987	-0.025	-0.028	-0.028	-0.021	-0.024	-0.024
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1988	0.003	0.003	0.004	0.007	0.008	0.009
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1989	0.022	0.019	0.019	0.026	0.024	0.024
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1990	-0.006	-0.012	-0.011	-0.004	-0.007	-0.008
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
AR(1)	0.142	0.127	0.129	0.198	0.199	0.186
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
FIRM	X	X	X			
R-square	0.230	0.230	0.239	0.172	0.170	0.181

INVDUM= dummy for investment spending in year>.2*plant’s capital stock

Table B6
Investment - Cooper Model with Lagged Investment
Productive Investment Rate (PRODINV/K)
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG		-0.251	-0.321	-0.322	-0.296	
		(0.08)	(0.09)	(0.09)	(0.08)	
ABATEYR		0.033	0.033	0.034	0.033	0.028
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
VOTE	-0.036	-0.026	-0.025	0.042	-0.009	-0.033
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
INVDUM-1	0.084	0.080	0.078	0.078	0.077	0.073
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
INVDUM-2	-0.046	-0.049	-0.051	-0.051	-0.052	-0.058
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-3	0.029	0.027	0.026	0.026	0.023	0.017
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-4	-0.009	-0.010	-0.011	-0.011	-0.013	-0.022
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-5	0.008	0.005	0.004	0.004	0.002	-0.008
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-6	-0.012	-0.019	-0.020	-0.020	-0.021	-0.033
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
INVDUM-7	-0.020	-0.023	-0.024	-0.024	-0.024	-0.041
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
KRAFT			-	+		
SULF			+	+		
MECH			-	-		
DEINK			-	+		
KRAFT*VOTE				-		
SULF*VOTE				+		
MECH*VOTE				-		
DEINK*VOTE				-		

Table B6 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
BOX					-	
FINE					+	
NEWS					-	
TISSUE					+	
1980	-0.009	-0.008	-0.008	-0.008	-0.008	-0.008
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1981	-0.033	-0.029	-0.028	-0.029	-0.029	-0.027
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1982	-0.029	-0.025	-0.025	-0.026	-0.027	-0.019
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1983	-0.051	-0.048	-0.048	-0.049	-0.050	-0.043
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1984	-0.018	-0.016	-0.016	-0.016	-0.017	-0.009
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1985	0.013	0.015	0.015	0.016	0.014	0.022
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1986	-0.027	-0.023	-0.023	-0.023	-0.024	-0.020
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1987	-0.021	-0.026	-0.027	-0.027	-0.027	-0.017
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1988	0.006	0.006	0.005	0.005	0.005	0.013
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1989	0.026	0.022	0.022	0.022	0.022	0.030
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1990	-0.004	-0.008	-0.008	-0.008	-0.008	0.000
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
AR(1)	0.139	0.132	0.132	0.132	0.127	0.114
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
FIRM	X	X	X	X	X	
PLANT						X
RSQUARE	0.225	0.240	0.245	0.246	0.247	0.266

INVDUM= dummy for investment spending in year>.2*plant's capital stock
(technology and product dummy coefficients suppressed, but not significant)

Table B7
First stage of Hausman test on ABATEAVG
Dependent Variable: ABATEAVG
(PACE subsample, N=67 plants)

Variable	Parameter Estimate	Standard Error
NONCAPPAOC	0.010738	0.02156656
DIRTY	-0.027142	0.03456573
ENETVS72	-0.523377	0.81423386
STENF	0.008442	0.00936754
ABATEDUM	0.179395	0.09498015
VOTE	0.001118	0.00240477
pQ/ct-1	-0.0000238	0.00003345
PQ/ct-2	0.0000199	0.00003421
Kt-1	-0.000000106	0.00000074
KRAFT	+	
SULF	+	
MECH	+	
DEINK	-	
KRAFT*VOTE	-	
SULF*VOTE	-	
MECH*VOTE	-	
DEINK*VOTE	+	
BOX	-	
FINE	+	
NEWS	-	
TISSUE	-	
R-square	.330	

NONCAPPAOC Non-capital pollution abatement operating costs/shipments (Average 1979-1991)
DIRTY Plant located in county failing to meet EPA air quality
ENETVS72 Plant energy expenditures/shipments in 1972
STENF Air pollution enforcement actions per plant reported in EPA's Compliance Data System for the state (1984-1987)
ABATEDUM Average of ABATEYR dummies

(technology and product dummy coefficients suppressed, but not significant)

Table B8
Productive Investment Spending
Hausman Test for ABATEAVG
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-9651	-8129	-14583	-13026	-15264	-12155
	(6946)	(10180)	(7003)	(10210)	(7063)	(10280)
RESIDUAL	-335.6	-14679	4704.4	-9714	5369.1	-9721
	(8416)	(12210)	(8401)	(12160)	(8468)	(12220)
ABATEYR			2527.5	2265.8	2537.6	2251.8
			(851.20)	(872.70)	(850.90)	(871.50)
VOTE					-34.50	-50.11
					(29.40)	(33.96)
pQ/c_{t-1}	0.414	0.319	0.385	0.295	0.381	0.290
	(0.15)	(0.16)	(0.15)	(0.16)	(0.14)	(0.16)
pQ/c_{t-2}	-0.032	0.001	-0.047	-0.013	-0.054	-0.025
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
K_{t-1}	0.029	0.045	0.029	0.043	0.025	0.039
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1980	-593.5	-616.2	-557.5	-576.5	-474.4	-462.2
	(1352)	(1372)	(1354)	(1373)	(1352)	(1371)
1981	-1560	-1567	-1241	-1270	-1137	-1131
	(1536)	(1536)	(1532)	(1535)	(1535)	(1537)
1982	-1926	-2033	-1530	-1671	-1198	-1212
	(1589)	(1582)	(1583)	(1580)	(1610)	(1611)

Table B8 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
1983	-3287	-3525	-3012	-3272	-2691	-2825
	(1590)	(1586)	(1579)	(1579)	(1605)	(1609)
1984	-1235	-1560	-1047	-1383	-716.0	-920.8
	(1598)	(1598)	(1585)	(1589)	(1612)	(1621)
1985	454.78	172.92	624.62	334.59	845.33	633.19
	(1599)	(1598)	(1586)	(1589)	(1599)	(1603)
1986	-308.0	-576.5	-86.18	-382.3	64.653	-167.5
	(1622)	(1640)	(1609)	(1632)	(1617)	(1639)
1987	-890.8	-1228	-1307	-1632	-1017	-1165
	(1622)	(1678)	(1614)	(1673)	(1634)	(1703)
1988	1100.3	779.76	1048.1	702.19	1333.7	1152.5
	(1613)	(1673)	(1600)	(1663)	(1619)	(1691)
1989	2426.8	2410.7	2204.0	2175.8	2545.6	2706.5
	(1624)	(1669)	(1618)	(1664)	(1644)	(1701)
1990	696.66	596.49	355.52	263.49	702.78	800.52
	(1363)	(1436)	(1369)	(1442)	(1397)	(1483)
FIRM		X		X		X
AR(1)	0.284	0.245	0.269	0.234	0.274	0.240
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.271	0.308	0.279	0.314	0.280	0.316

RESIDUAL = first stage residual (generated from Table B7)

Table B9
Productive Investment Spending
Hausman Test for ABATEAVG
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-23378	-19805	-24188	-22595	-10503	-11582
	(9108)	(14730)	(9566)	(15240)	(7536)	(10660)
RESIDUAL	13565	527.12	14414	2800.7	633.94	-11640
	(10250)	(17800)	(10650)	(18120)	(8864)	(12740)
ABATEYR	2576.4	2307.9	2605.2	2363.3	2349.6	2238.3
	(852.90)	(876.80)	(855.60)	(879.40)	(856.30)	(872.50)
VOTE	-26.32	-47.80	11.333	22.314	-37.14	-62.11
	(30.10)	(34.21)	(61.23)	(71.16)	(29.51)	(35.04)
pQ/c_{t-1}	0.368	0.279	0.375	0.291	0.394	0.307
	(0.15)	(0.16)	(0.15)	(0.16)	(0.15)	(0.16)
pQ/c_{t-2}	-0.049	-0.036	-0.053	-0.035	-0.037	-0.004
	(0.15)	(0.16)	(0.15)	(0.16)	(0.15)	(0.16)
K_{t-1}	0.015	0.034	0.014	0.038	0.015	0.027
	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)
KRAFT	+	+	+	+		
SULF	+	+	+	+		
MECH	+	-	-	-		
DEINK	-	-	-	-		
KRAFT*VOTE			-	-		
SULF*VOTE			-	-		
MECH*VOTE			+	+		
DEINK*VOTE			-	+		

Table B9 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
BOX					+	+
FINE					+	+
NEWS					+	-
TISSUE					+	-
1980	-448.3	-450.4	-462.9	-468.5	-434.3	-391.4
	(1353)	(1374)	(1359)	(1379)	(1353)	(1369)
1981	-1077	-1092	-1143	-1264	-1105	-1047
	(1535)	(1540)	(1547)	(1553)	(1535)	(1536)
1982	-1162	-1157	-1212	-1372	-1162	-1076
	(1609)	(1615)	(1628)	(1637)	(1609)	(1612)
1983	-2670	-2768	-2670	-2860	-2654	-2700
	(1604)	(1613)	(1611)	(1621)	(1604)	(1611)
1984	-715.6	-891.8	-707.2	-975.8	-644.7	-748.5
	(1612)	(1625)	(1622)	(1637)	(1612)	(1626)
1985	879.51	656.20	916.67	692.33	932.02	799.22
	(1598)	(1607)	(1602)	(1609)	(1599)	(1607)
1986	83.181	-163.1	117.20	-159.5	161.18	14.239
	(1616)	(1644)	(1620)	(1647)	(1617)	(1647)
1987	-1030	-1245	-1013	-1272	-813.3	-830.3
	(1633)	(1714)	(1643)	(1722)	(1637)	(1722)
1988	1318.3	1074.5	1337.8	1051.9	1507.5	1460.8
	(1619)	(1700)	(1629)	(1709)	(1622)	(1707)
1989	2553.0	2650.3	2595.2	2688.8	2697.7	2972.5
	(1644)	(1708)	(1650)	(1713)	(1646)	(1709)
1990	721.55	790.75	756.36	760.78	819.97	971.03
	(1399)	(1488)	(1405)	(1493)	(1400)	(1485)
FIRM		X		X		X
AR(1)	0.272	0.240	0.271	0.239	0.272	0.242
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.284	0.318	0.284	0.320	0.284	0.322

(technology and product dummy coefficients suppressed, but not significant)

Table B10
Investment Models
Productive Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-17164		-19080	-9880		-11315
	(6797)		(6740)	(3897)		(3855)
ABATEYR		2087.2	2375.0		2069.4	2427.0
		(861.00)	(863.30)		(828.80)	(833.30)
pQ/ct-1	0.308	0.299	0.286	0.413	0.397	0.388
	(0.16)	(0.16)	(0.16)	(0.14)	(0.15)	(0.14)
pQ/ct-2	-0.001	-0.060	-0.015	-0.032	-0.047	-0.046
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
Kt-1	0.056	0.042	0.050	0.029	0.024	0.028
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
1980	-650.5	-597.3	-596.9	-593.7	-552.9	-555.0
	(1373)	(1382)	(1374)	(1351)	(1356)	(1352)
1981	-1619	-1299	-1289	-1560	-1282	-1248
	(1536)	(1541)	(1534)	(1535)	(1539)	(1532)
1982	-2093	-1677	-1692	-1926	-1583	-1539
	(1581)	(1585)	(1578)	(1588)	(1591)	(1582)
1983	-3594	-3215	-3304	-3287	-3034	-3016
	(1585)	(1583)	(1577)	(1589)	(1588)	(1579)
1984	-1642	-1363	-1428	-1235	-1048	-1047
	(1596)	(1593)	(1587)	(1597)	(1594)	(1585)
1985	86.874	293.47	286.45	454.13	623.57	626.60
	(1596)	(1592)	(1586)	(1598)	(1595)	(1585)
1986	-682.1	-423.8	-441.9	-308.7	-84.16	-84.20
	(1638)	(1635)	(1629)	(1621)	(1619)	(1609)
1987	-1364	-1783	-1741	-891.7	-1189	-1278
	(1673)	(1672)	(1666)	(1621)	(1622)	(1613)
1988	652.69	519.36	615.36	1099.4	1095.2	1061.9
	(1669)	(1664)	(1658)	(1611)	(1608)	(1599)
1989	2321.4	1998.8	2106.4	2426.2	2260.0	2220.5
	(1667)	(1668)	(1661)	(1623)	(1625)	(1617)
1990	491.62	169.58	179.54	696.04	445.76	377.21
	(1435)	(1447)	(1439)	(1362)	(1371)	(1367)
FIRM	X	X	X			
AR(1)	0.243	0.228	0.232	0.284	0.274	0.270
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R2	0.307	0.307	0.314	0.271	0.271	0.278

Table B11
Investment Models
Productive Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG		-18214	-19426	-20539	-18910	
		(6810)	(7195)	(7342)	(6883)	
ABATEYR		2360.0	2303.4	2339.3	2353.4	1763.8
		(862.20)	(864.10)	(865.90)	(865.30)	(862.70)
VOTE	-59.26	-50.10	-47.76	21.633	-60.81	-18.99
	(34.12)	(33.89)	(34.16)	(71.00)	(34.94)	(51.35)
pQ/ct-1	0.309	0.281	0.280	0.293	0.290	0.214
	(0.16)	(0.15)	(0.16)	(0.16)	(0.16)	(0.16)
pQ/ct-2	-0.055	-0.027	-0.036	-0.034	-0.010	-0.219
	(0.15)	(0.15)	(0.15)	(0.16)	(0.16)	(0.16)
Kt-1	0.044	0.046	0.034	0.037	0.036	-0.247
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.05)
KRAFT			+	+		
SULF			+	+		
MECH			-	-		
DEINK			-	-		
KRAFT*VOTE				-		
SULF*VOTE				-		
MECH*VOTE				+		
DEINK*VOTE				+		
BOX					+	
FINE					+	
NEWS					-	
TISSUE					-	

Table B11 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
1980	-509.3	-482.6	-450.1	-466.0	-422.9	368.65
	(1377)	(1372)	(1373)	(1378)	(1371)	(1346)
1981	-1426	-1151	-1092	-1265	-1076	417.31
	(1542)	(1536)	(1539)	(1552)	(1535)	(1517)
1982	-1491	-1234	-1158	-1378	-1112	940.98
	(1616)	(1609)	(1614)	(1635)	(1611)	(1629)
1983	-2956	-2857	-2768	-2865	-2749	-482.4
	(1617)	(1607)	(1612)	(1619)	(1608)	(1627)
1984	-1018	-965.8	-891.5	-976.9	-825.5	1047.3
	(1630)	(1619)	(1624)	(1636)	(1622)	(1626)
1985	468.14	584.97	657.06	695.26	716.48	2514.6
	(1613)	(1600)	(1605)	(1608)	(1603)	(1585)
1986	-388.5	-227.3	-161.6	-153.5	-94.57	1245.1
	(1648)	(1636)	(1642)	(1646)	(1642)	(1603)
1987	-890.9	-1273	-1241	-1252	-1010	95.827
	(1707)	(1696)	(1707)	(1716)	(1711)	(1673)
1988	1098.3	1065.9	1078.0	1067.0	1307.0	1995.3
	(1701)	(1686)	(1695)	(1705)	(1698)	(1663)
1989	2836.2	2637.5	2652.9	2700.2	2860.7	3725.3
	(1710)	(1699)	(1705)	(1711)	(1704)	(1670)
1990	1086.0	716.94	792.45	768.96	865.56	2935.0
	(1483)	(1480)	(1486)	(1491)	(1482)	(1466)
FIRM	X	X	X	X	X	
PLANT						X
AR(1)	0.245	0.238	0.240	0.239	0.238	0.235
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R2	0.304	0.316	0.318	0.320	0.321	0.373

(technology and product dummy coefficients suppressed, but not significant)

Table B12
Investment Models
Total Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)	(6)
ABATEAVG	-15221		-18174	-7886		-10792
	(7120)		(6941)	(4094)		(4052)
ABATEYR		3574.3	3822.3		3589.4	4414.9
		(856.70)	(858.90)		(824.40)	(829.00)
pQ/c_{t-1}	0.363	0.337	0.328	0.465	0.432	
	(0.16)	(0.15)	(0.15)	(0.14)	(0.14)	
pQ/c_{t-2}	-0.004	-0.069	-0.027	-0.037	-0.061	
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	
K_{t-1}	0.061	0.044	0.051	0.032	0.026	0.083
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)
1980	-971.8	-886.2	-887.1	-905.7	-842.7	-896.0
	(1360)	(1362)	(1354)	(1339)	(1337)	(1342)
1981	-2101	-1576	-1572	-2024	-1553	-1383
	(1545)	(1537)	(1531)	(1543)	(1533)	(1538)
1982	-2693	-2029	-2051	-2511	-1928	-1398
	(1602)	(1589)	(1584)	(1608)	(1592)	(1593)
1983	-3981	-3428	-3516	-3664	-3243	-3211
	(1610)	(1590)	(1586)	(1615)	(1593)	(1607)
1984	-1970	-1565	-1627	-1561	-1260	-1731
	(1623)	(1601)	(1597)	(1625)	(1601)	(1611)
1985	-287.8	37.358	28.703	79.505	352.10	-27.98
	(1623)	(1601)	(1596)	(1627)	(1602)	(1612)
1986	-1048	-650.6	-666.0	-696.1	-336.3	-1573
	(1665)	(1643)	(1639)	(1649)	(1625)	(1613)
1987	-1387	-2048	-2001	-984.3	-1531	-3082
	(1703)	(1682)	(1678)	(1649)	(1628)	(1607)
1988	651.68	491.59	584.75	1039.5	1004.1	-349.8
	(1695)	(1671)	(1667)	(1634)	(1611)	(1589)
1989	2685.5	2233.1	2333.1	2740.9	2439.5	2380.0
	(1679)	(1666)	(1660)	(1631)	(1618)	(1536)
1990	1026.4	513.72	522.85	1184.8	731.11	657.96
	(1426)	(1429)	(1422)	(1350)	(1352)	(1350)
FIRM	X	X	X			
AR(1)	0.283	0.259	0.263	0.322	0.301	0.306
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.349	0.359	0.365	0.315	0.328	0.315

Table B13
Investment Models
Total Investment Spending
(PACE Subsample, N=816)

	(1)	(2)	(3)	(4)	(5)
ABATEAVG		-17261	-18754	-20004	-18012
		(7018)	(7420)	(7567)	(7091)
ABATEYR		3801.3	3738.4	3773.0	3798.8
		(857.50)	(859.20)	(861.00)	(860.20)
VOTE	-61.07	-51.48	-49.74	21.288	-62.81
	(35.18)	(34.55)	(34.84)	(72.77)	(35.58)
pQ/c_{t-1}	0.361	0.323	0.322	0.337	0.335
	(0.16)	(0.15)	(0.15)	(0.15)	(0.16)
pQ/c_{t-2}	-0.052	-0.040	-0.050	-0.048	-0.022
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
K_{t-1}	0.050	0.047	0.034	0.037	0.037
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
KRAFT			+	+	
SULF			+	+	
MECH			-	-	
DEINK			-	-	
KRAFT*VOTE				-	
SULF*VOTE				-	
MECH*VOTE				+	
DEINK*VOTE				+	
BOX					+
FINE					+
NEWS					-
TISSUE					-

Table B13 (cont.)

	(1)	(2)	(3)	(4)	(5)
1980	-826.2	-769.5	-733.1	-752.7	-706.5
	(1363)	(1352)	(1353)	(1358)	(1351)
1981	-1905	-1430	-1366	-1531	-1353
	(1550)	(1533)	(1536)	(1549)	(1532)
1982	-2079	-1581	-1494	-1695	-1455
	(1636)	(1616)	(1621)	(1642)	(1617)
1983	-3340	-3057	-2956	-3038	-2944
	(1641)	(1617)	(1623)	(1630)	(1618)
1984	-1339	-1152	-1066	-1131	-1002
	(1657)	(1630)	(1636)	(1647)	(1633)
1985	101.49	335.81	417.44	462.73	477.19
	(1639)	(1611)	(1617)	(1620)	(1614)
1986	-754.7	-444.7	-370.5	-350.0	-297.0
	(1674)	(1647)	(1653)	(1657)	(1652)
1987	-889.4	-1520	-1476	-1469	-1234
	(1736)	(1709)	(1720)	(1730)	(1723)
1988	1123.1	1048.1	1071.0	1077.4	1311.2
	(1726)	(1696)	(1706)	(1715)	(1707)
1989	3236.9	2878.7	2905.6	2960.6	3115.2
	(1722)	(1699)	(1705)	(1711)	(1704)
1990	1647.3	1074.5	1167.2	1150.8	1227.3
	(1476)	(1466)	(1472)	(1476)	(1468)
FIRM	X	X	X	X	X
AR(1)	0.285	0.270	0.273	0.272	0.270
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
R^2	0.347	0.367	0.369	0.370	0.372

(technology and product dummy coefficients suppressed, but not significant)