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APPENDIX A

INDUSTRIAL CLASSIFICATION

Nadiri-Rosen Code	*Industry*	*U.S. Standard Industrial Classification (SIC)*
00	Total manufacturing	
01	Total durables	
	Ordnance and accessories	19
	Lumber and wood products	24
	Furniture and fixtures	25
	Stone, clay, and glass products	32
	Primary metal industries	33
	Fabricated metal products	34
	Machinery, except electrical	35
	Electrical equipment and supplies	36
	Transportation equipment	37
	Instruments and related products	38
	Miscellaneous manufacturing industries	39
02	Primary iron and steel	
	Blast furnace and basic steel products	331
	Iron and steel foundries	332
03	Primary nonferrous metal	333
	Secondary nonferrous metals	334
	Nonferrous rolling and drawing	335
	Nonferrous foundries	336
	Miscellaneous primary metal products	339
04	Electrical machinery and equipment	36
05	Machinery except electrical	35
06	Motor vehicles and equipment	371
07	Transportation equipment excluding motor vehicles	
	Aircraft and parts	372
	Ship and boatbuilding and repairing	373
	Railroad equipment	374
	Other transportation equipment	375, 379

Nadiri-Rosen Code	*Industry*	*U.S. Standard Industrial Classification (SIC)*
08	Stone, clay, and glass products	
09	Other durables	
	Ordnance and accessories	19
	Lumber and wood products	24
	Furniture and fixtures	25
	Fabricated metal products	34
	Instruments and related products	38
	Miscellaneous manufacturing industries	39
10	Total nondurables	
	Food and kindred products	20
	Tobacco manufactures	21
	Textile mill products	22
	Apparel and other textile products	23
	Paper and allied products	26
	Printing and publishing	27
	Chemicals and allied products	28
	Petroleum and coal products	29
	Rubber and plastics products	30
	Leather and leather products	31
11	Food and beverages	20
12	Textile mill products	22
13	Paper and allied products	26
14	Chemical and allied products	28
15	Petroleum and coal products	29
16	Rubber products	30
17	Other nondurables	
	Tobacco manufacture	21
	Apparel and other textile products	23
	Printing and publishing	27
	Leather and leather products	31

APPENDIX B

DESCRIPTIVE STATISTICS OF QUARTERLY TIME SERIES FOR INDIVIDUAL INDUSTRIES AND INDUSTRY AGGREGATES

TABLE B.1

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR TOTAL DURABLES, PRIMARY IRON AND STEEL, AND PRIMARY NONFERROUS METAL

(sample period: 1953I–1967IV)

Variables[a]	Total Durables (01)			Primary Iron and Steel (02)			Primary Nonferrous Metal (03)		
	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	7.289	0.6126	8.405	0.718	0.076	10.580	0.311	0.025	8.030
Y_2	40.841	0.8132	1.991	39.995	1.511	3.777	41.478	0.994	2.390
Y_3	40.656	8.484	20.868	8.155	0.657	8.050	4.341	0.624	14.370
Y_4	0.8989	0.834	9.283	0.778	0.147	18.890	0.791	0.101	12.760
Y_5	30.826	7.429	24.103	3.407	0.512	15.020	1.984	0.383	19.300
Y_6	2.190	0.492	22.475	0.145	0.009	6.200	0.083	0.006	7.220
S	47.651	10.800	22.665	5.479	1.064	19.410	3.488	0.601	17.230
w	2.194	0.486	22.137	2.789	0.405	14.510	2.566	0.389	15.170
c	0.1164	0.035	29.940	0.131	0.028	21.445	0.131	0.028	21.445
P	0.9323	0.114	12.289	0.968	1.004	10.369	1.024	0.059	5.803

a. For description and units of measure, see Table 3.1.

TABLE B.2

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR ELECTRICAL MACHINERY AND EQUIPMENT, MACHINERY EXCEPT ELECTRICAL, AND MOTOR VEHICLES AND EQUIPMENT
(sample period: 1953I–1967IV)

Variables[a]	Electrical Machinery and Equipment (04)			Machinery Except Electrical (05)			Motor Vehicles and Equipment (06)		
	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	1.031	0.134	12.990	1.115	0.121	10.850	0.596	0.080	13.422
Y_2	40.400	0.546	1.350	41.798	1.043	2.490	41.767	1.534	3.672
Y_3	3.427	0.607	17.710	6.346	1.330	20.950	5.835	0.731	12.527
Y_4	0.901	0.086	9.540	0.841	0.096	11.410	0.811	0.139	17.139
Y_5	5.709	0.909	15.920	5.377	1.785	33.190	2.483	0.586	23.600
Y_6	0.448	0.100	20.490	0.453	0.065	14.340	0.169	0.012	7.100
S	7.153	1.533	21.431	6.723	1.953	29.040	8.311	1.958	23.559
w	2.245	0.317	14.125	2.542	0.383	15.069	2.798	0.453	16.183
c	0.131	0.028	21.445	0.131	0.028	21.445	0.131	0.028	21.445
P	0.965	0.052	5.385	1.006	0.113	11.258	0.973	0.059	6.156

a. For description and units of measure, see Table 3.1.

TABLE B.3

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR TRANSPORTATION EQUIPMENT EXCLUDING MOTOR VEHICLES; STONE, CLAY, AND GLASS; AND OTHER DURABLES

(sample period: 1953I–1967IV)

	Transportation Equipment Excluding Motor Vehicles (07)			Stone, Clay, and Glass (08)			Other Durables (09)		
Variables[a]	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	0.649	0.100	15.408	0.489	0.016	3.271	2.485	0.149	5.995
Y_2	41.107	0.702	1.707	41.062	0.646	1.573	40.562	0.617	1.521
Y_3	2.436	0.770	31.600	4.270	0.768	17.985	9.467	1.402	14.809
Y_4	0.889	0.068	7.649	0.927	0.059	6.364	0.942	0.050	5.307
Y_5	4.807	0.817	16.996	1.342	0.271	20.193	8.633	0.909	10.529
Y_6	0.314	0.036	11.464	0.109	0.013	11.926	0.692	0.100	14.450
S	5.080	0.865	17.027	2.752	0.437	15.879	12.509	1.786	14.277
w	2.642	0.423	16.010	2.259	0.334	14.779	2.173	3.146	14.482
c	0.131	0.028	21.445	0.131	0.028	21.445	0.131	0.028	21.444
P	0.9884	0.073	7.376	0.993	0.060	6.048	1.002	0.053	5.255

a. For description and units of measure, see Table 3.1.

TABLE B.4

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR TOTAL NONDURABLES, FOOD AND BEVERAGES, AND TEXTILE MILL PRODUCTS (sample period: 1953I–1967IV)

	Total Nondurables (10)			Food and Beverages (11)			Textile Mill Products (12)		
Variables[a]	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	5.705	0.1755	3.0765	1.224	0.056	4.575	0.872	0.075	8.600
Y_2	39.5275	0.4529	1.1460	41.045	0.266	0.6480	40.068	1.180	2.944
Y_3	49.1691	6.2173	1.2645	9.167	0.232	2.530	3.472	0.324	9.331
Y_4	0.9517	0.049	5.1746	0.960	0.036	3.750	0.948	0.053	5.590
Y_5	20.4499	3.7226	18.2034	5.655	0.671	11.865	2.427	0.318	13.102
Y_6	1.66811	0.2295	13.7611	0.565	0.029	5.132	0.092	0.006	6.521
S	42.5308	9.095	21.3850	15.804	2.138	13.528	3.685	0.639	17.340
w	1.8727	0.3948	21.0846	2.076	0.342	16.478	1.625	0.214	13.171
c	0.1164	0.0348	29.9402	0.131	0.028	21.445	0.131	0.028	21.445
P	0.9887	0.0400	4.051	1.001	0.031	3.128	1.011	0.031	3.098

a. For description and units of measure, see Table 3.1.

TABLE B.5

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR PAPER AND ALLIED PRODUCTS, CHEMICAL AND ALLIED PRODUCTS, AND PETROLEUM AND COAL PRODUCTS
(sample period: 1953I–1967IV)

	Paper and Allied Products (13)			Chemical and Allied Products (14)			Petroleum and Coal Products (15)		
Variables[a]	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	0.476	0.024	5.042	0.526	0.026	4.942	0.138	0.020	14.492
Y_2	42.675	0.459	1.075	41.313	0.397	0.9609	41.382	0.608	1.469
Y_3	5.041	1.066	21.146	9.923	1.288	12.979	18.166	1.169	6.435
Y_4	0.964	0.036	3.734	0.962	0.036	3.742	0.967	0.032	3.309
Y_5	1.600	0.282	17.625	3.419	0.753	22.023	1.689	0.108	6.394
Y_6	0.119	0.019	15.966	0.315	0.047	14.920	0.071	0.002	2.816
S	3.825	0.692	18.091	6.967	1.731	24.845	4.138	0.422	10.198
w	2.250	0.366	16.271	2.459	0.399	16.217	2.883	0.403	13.969
c	0.131	0.028	21.445	0.131	0.028	21.445	0.131	0.028	21.445
P	0.9743	0.046	4.781	1.0019	0.026	2.587	1.009	0.054	5.385

a. For description and units of measure, see Table 3.1.

TABLE B.6

DESCRIPTIVE STATISTICS OF QUARTERLY TIME-SERIES DATA FOR RUBBER PRODUCTS AND OTHER NONDURABLES
(sample period: 1953I–1967IV)

	Rubber Products (16)			Other Nondurables (17)		
Variables[a]	Mean	Stand. Dev.	Coeff. of Var. × 100	Mean	Stand. Dev.	Coeff. of Var. × 100
Y_1	0.312	0.043	13.782	2.111	0.084	3.979
Y_2	40.797	0.954	2.338	37.138	0.386	1.039
Y_3	1.555	0.248	15.948	4.303	0.444	10.318
Y_4	0.918	0.075	8.169	0.965	0.032	3.316
Y_5	1.062	0.195	18.361	6.160	0.619	10.048
Y_6	0.089	0.014	15.730	0.518	0.041	7.915
S	2.021	0.440	21.771	9.736	1.588	16.310
w	2.289	0.292	12.771	1.991	0.268	13.469
c	0.131	0.028	21.445	0.131	0.028	21.445
P	0.998	0.067	6.747	0.985	0.028	2.914

a. For description and units of measure, see Table 3.1.

APPENDIX C

ESTIMATED STRUCTURE OF THE MODEL

TABLE C.1

PREDICTIVE AND STRUCTURAL TESTS OF MODEL (4.1), TOTAL MANUFACTURING, 1948I–1967IV AND 1968I–1970II

	Predictive Tests (F_p)	Structural Tests (F_S)
Y_1	0.7102	0.4975
Y_2	1.6982	1.0930
Y_3	0.3994	0.5491
Y_4	0.9311	0.5836
Y_5	0.7229	0.4986
Y_6	1.2835	1.0092

COMMENT: A comparison of F_p and F_S with their critical values (1.99 at the .05 level) suggests acceptance of the null hypothesis that the forecast errors are generated by model (4.1) and that no structural change occurred over the periods considered.

NOTE: The predictive and structural test statistics, F_p and F_S, were calculated as

$$F_p = \frac{V_1^2/m}{V_2^2/(n-k)} = \frac{e_0'[I + X_0(X'X)^{-1}X_0]^{-1}e_0/m}{e'e/(n-k)},$$

$$F_S = \frac{(X\beta_1 - X\beta_2)^2 + (Y_0 - X_0\beta_2)^2}{(Y - X\beta_1)^2} \quad \frac{n-k}{k},$$

where V_1^2 and V_2^2 are the sums of squared errors for the forecast and sample periods; n and m are the number of observations in the sample and the forecast periods, respectively; k is the number of independent variables. Y is the vector of observations on the dependent variables and X is the matrix of observations

on k independent variables during the period of fit; while X_0 is a matrix of observations of the independent variable and Y_0 is the vector of the dependent variable for the period of forecast and β_1 and β_2 are the estimated coefficients of model (4.1) for the sample period and the whole period 1948I–1970II. The statistic F_S is an approximate test of structural change (see Johnson [1963], pp. 137–38 for further details).

TABLE C.2

ESTIMATED STRUCTURE OF MODEL (4.1) WITH FORECASTED SALES VARIABLE (Z_1), TOTAL MANUFACTURING SECTOR

(sample period: 1948I–1967IV; all variables except trend are in natural logarithms)

	Dependent Variables					
Independent Variables	Prod. Emp. (Y_{1t})	Hours (Y_{2t})	Capital (Y_{3t})	Util. (Y_{4t})	Inven. (Y_{5t})	Nonprod. Emp. (Y_{6t})
Constant	−6.720	−.0008	.5990	.0909	−7.269	−.7155
	(6.559)	(.0175)	(1.644)	(.8414)	(3.137)	(1.424)
Wage	−.0124	−.0201	−.0176	−.0009	−.0391	−.0254
	(.5070)	(1.319)	(.8655)	(.1654)	(.4266)	(.8736)
Trend	−.0036	.0018	.0007	.0004	−.0032	.0012
	(4.966)	(2.280)	(1.447)	(2.612)	(1.424)	(1.608)
Sales	.1855	.0010	−.0009	.0049	−.0384	−.0208
	(2.270)	(.8041)	(.2419)	(.3646)	(1.216)	(4.095)
Y_{1t-1}	.5041	.0303	.0047	.0989	−.0436	.3211
	(6.754)	(.6144)	(.0854)	(6.076)	(.1673)	(4.069)
Y_{2t-1}	1.674	.0982	.7529	−.0595	3.001	.6070
	(6.019)	(.8816)	(4.587)	(1.126)	(3.870)	(2.600)
Y_{3t-1}	.3238	−.0250	−.0435	.9409	.2536	−.1033
	(3.726)	(.2614)	(.5872)	(41.07)	(.8063)	(.9675)
Y_{4t-1}	−.1285	.0384	−.0491	−.0148	.0296	−.0924
	(3.096)	(2.534)	(2.102)	(2.265)	(.2413)	(2.802)
Y_{5t-1}	−.0389	.0048	−.0083	.0153	−.6940	.6222
	(.6340)	(.1345)	(.1902)	(1.248)	(3.350)	(9.926)
Y_{6t-1}	.0351	.7346	−.0352	−.0216	1.110	.3464
	(.4606)	(8.102)	(.5908)	(1.303)	(4.143)	(4.037)
R^2	.9561	.9364	.5464	.9995	.6330	.9929
SEE	.0123	.0045	.0070	.0019	.0368	.0100
$\hat{\rho}$	.0261	.9187	.4975	.4975	.3093	.5141

TABLE C.3

ESTIMATED STRUCTURE OF MODEL (4.1) WITHOUT UTILIZATION RATE (Y_4), TOTAL MANUFACTURING SECTOR

(sample period: 1948I–1967IV; all variables except trend are in natural logarithms)

	Dependent Variables				
Independent Variables	Prod. Emp. (Y_{1t})	Hours (Y_{2t})	Capital (Y_{3t})	Inven. (Y_{5t})	Nonprod. Emp. (Y_{6t})
Constant	−2.402	4.816	.2470	−.6588	−.9657
	(2.905)	(7.964)	(1.198)	(.5935)	(1.814)
Wage	−.0140	−.0336	.0015	−.0240	−.0143
	(.5932)	(2.055)	(.2965)	(.8092)	(.9395)
Trend	−.0044	.0014	.0002	.0010	.00008
	(5.394)	(1.803)	(.6524)	(1.343)	(.1622)
Sales	.4470	.1892	−.0048	.0168	.0404
	(13.35)	(8.611)	(.6935)	(.3421)	(1.848)
Y_{1t-1}	.4349	.0451	.0279	.2694	−.0032
	(6.933)	(.9700)	(1.738)	(3.380)	(.0798)
Y_{2t-1}	.3652	−.2006	−.0022	.3519	.2530
	(2.019)	(1.715)	(.0596)	(1.324)	(2.134)
Y_{3t-1}	.1835	−.2009	.8987	−.0918	.00002
	(1.756)	(2.187)	(26.63)	(.8460)	(.0004)
Y_{5t-1}	.0020	−.0599	.0038	.6662	.0009
	(.0410)	(1.665)	(.3263)	(10.54)	(.0296)
Y_{6t-1}	−.0689	−.1302	.1038	.2555	.9248
	(.8184)	(1.576)	(3.279)	(3.142)	(18.07)
R^2	.9853	.9390	.9999	.9980	.9995
SSR	.0036	.0016	.0001	.0076	.0015
SEE	.0072	.0047	.0015	.0104	.0047
$\hat{\rho}$	.7295	.8803	.9516	.4853	.6985

TABLE C.4

ESTIMATED STRUCTURE OF MODEL (4.1) WITH FORWARD VALUES OF SALES AND WAGES, TOTAL MANUFACTURING SECTOR

(sample period: 1948I–1967IV; all variables except trend are in natural logarithms)

Independent Variables	Dependent Variables: Prod. Emp. (Y_{1t})	Hours (Y_{2t})	Capital (Y_{3t})	Util. (Y_{4t})	Inven. (Y_{5t})	Nonprod. Emp. (Y_{6t})
Constant	−2.608	.9030	.0828	3.986	−.6967	−.0116
	(2.907)	(2.507)	(.3598)	(1.603)	(.5599)	(.0203)
Wage	−.0182	−.0127	.0011	−.0863	.0220	−.0071
	(.6794)	(.8213)	(.2100)	(.9360)	(.5744)	(.4534)
Trend	−.0051	−.0015	−.00002	−.0071	.0017	.0003
	(5.985)	(7.213)	(.0596)	(4.443)	(1.629)	(.5191)
Sales	.4085	.0964	−.0048	1.060	−.0005	.0342
	(10.91)	(3.446)	(.6427)	(7.062)	(.0098)	(1.638)
Y_{1t-1}	.4819	−.0821	.0488	−.2650	.2980	.0160
	(7.764)	(3.892)	(2.749)	(1.736)	(3.544)	(.3896)
Y_{2t-1}	.4468	.7099	.0329	−.2061	.6219	−.0086
	(2.009)	(7.479)	(.7320)	(.3119)	(1.958)	(.0676)
Y_{3t-1}	.1448	−.0137	.9116	−.2894	−.1596	−.0795
	(1.417)	(.4821)	(26.82)	(1.402)	(1.232)	(1.031)
Y_{4t-1}	−.0251	−.0389	−.0114	.1307	−.1209	.0470
	(.9064)	(2.566)	(1.995)	(1.345)	(2.997)	(2.985)
Y_{5t-1}	−.0357	−.0717	.0094	−.5533	.6903	.0332
	(.5772)	(3.725)	(.6585)	(3.924)	(8.295)	(.8524)
Y_{6t-1}	.0065	.0717	.0805	.8861	.2840	.8385
	(.0789)	(3.112)	(2.416)	(5.317)	(2.716)	(12.25)
S_{t+1}	.0730	.0807	.0071	.0088	.0367	.0358
	(2.068)	(2.674)	(.9971)	(.0589)	(.7044)	(1.807)
S_{t+2}	−.0584	−.0643	−.0097	.1610	.0001	.0252
	(1.473)	(2.027)	(1.229)	(.9984)	(.0030)	(1.137)
S_{t+3}	.0582	.0545	.0071	−.2653	−.0769	.0059
	(1.554)	(1.779)	(.9470)	(1.685)	(1.393)	(.2848)
S_{t+4}	.0221	.0385	.0033	−.0215	−.0044	−.0154
	(.5599)	(1.843)	(.4067)	(.1697)	(.0785)	(.6692)
w_{t+1}	−.0080	−.0071	−.0010	.1094	−.0667	−.0122
	(.2988)	(.3218)	(.1825)	(.9747)	(1.692)	(.7924)
w_{t+2}	−.0260	−.0315	−.0005	−.0972	−.0022	−.0255
	(.9485)	(1.387)	(.0882)	(.8508)	(.0546)	(1.630)
w_{t+3}	.0124	.0374	−.0039	.0349	.0122	−.0020
	(.4654)	(1.741)	(.7193)	(.3186)	(.3136)	(.1333)
w_{t+4}	−.0107	−.0040	−.0076	−.0397	−.0112	−.0093
	(.4277)	(.2838)	(1.411)	(.4668)	(.3146)	(.6320)
R^2	.9877	.9642	.9999	.9218	.9984	.9996
SSR	.0030	.0009	.0001	.0335	.0061	.0010
SEE	.0070	.0039	.0015	.0234	.0100	.0042
$\hat{\rho}$	.6305	−.2847	.9321	.0460	.5258	.8179

TABLE C.5

ESTIMATED STRUCTURE OF MODEL (4.1) WITH FORWARD VALUES OF SALES, TOTAL MANUFACTURING SECTOR

(sample period: 1948I–1967IV; all variables except trend are in natural logarithms)

Independent Variables	Dependent Variables					
	Prod. Emp. (Y_{1t})	Hours (Y_{2t})	Capital (Y_{3t})	Util. (Y_{4t})	Inven. (Y_{5t})	Nonprod. Emp. (Y_{6t})
Constant	−2.594	1.166	.0206	3.942	−.9935	−.0157
	(3.101)	(3.333)	(.0958)	(1.706)	(.8425)	(.0270)
Wage	−.0252	−.0245	.0015	−.0585	−.0056	−.0054
	(1.030)	(3.045)	(.2820)	(1.044)	(.1684)	(.3612)
Trend	−.0052	−.0015	−.00008	−.0074	.0016	.0009
	(6.284)	(6.891)	(.2523)	(4.872)	(1.556)	(1.004)
Sales	.4143	.1093	−.0043	1.085	−.0128	.0435
	(11.67)	(4.029)	(.5987)	(7.645)	(.2424)	(2.214)
Y_{1t-1}	.4839	−.0762	.0503	−.2501	.2998	.0657
	(7.953)	(3.495)	(2.923)	(1.677)	(3.588)	(1.406)
Y_{2t-1}	.3811	.6499	.0240	−.2444	.6160	−.1007
	(1.817)	(6.869)	(.5691)	(.3886)	(2.011)	(.8801)
Y_{3t-1}	.1701	−.0344	.9187	−.2518	−.0996	−.0536
	(1.829)	(1.352)	(28.10)	(1.426)	(.8525)	(.6047)
Y_{4t-1}	−.0178	−.0378	−.0103	.1185	−.1123	.0449
	(.6732)	(2.455)	(1.889)	(1.261)	(2.850)	(3.010)
Y_{5t-1}	−.0517	−.0681	.0036	−.5939	.6609	.0388
	(.9216)	(3.628)	(.2731)	(4.637)	(8.659)	(1.059)
Y_{6t-1}	.0142	.0671	.0854	.9202	.3003	.7121
	(.1741)	(2.839)	(2.661)	(5.744)	(2.918)	(8.166)
S_{t+1}	.0677	.0698	.0069	−.0197	.0386	.0375
	(2.022)	(2.402)	(1.019)	(.1377)	(.7698)	(2.012)
S_{t+2}	−.0443	−.0468	−.0081	.1488	.0252	.0366
	(1.208)	(1.551)	(1.109)	(.9907)	(.4598)	(1.847)
S_{t+3}	.0629	.0512	.0087	−.2347	−.0837	.0106
	(1.808)	(1.768)	(1.245)	(1.603)	(1.604)	(.5589)
S_{t+4}	.0163	.0310	.0075	−.0140	−.0150	−.0223
	(.4552)	(1.529)	(.9845)	(.1188)	(.2890)	(1.078)
R^2	.9874	.9607	.9999	.9198	.9983	.9996
SSR	.0031	.0010	.0001	.0344	.0065	.0011
SEE	.0069	.0039	.0015	.0230	.0100	.0041
$\hat{\rho}$	.6563	−.2284	.9278	.0566	.5455	.9283

APPENDIX D

GLOSSARY OF IMPORTANT SYMBOLS

Symbol	*Meaning*
A_1	Matrix of fixed coefficients
B	Matrix of adjustment coefficients
c	User cost of capital (rental price of capital)
c_I	User cost of inventories
$g(\ )$	Cost of changing inputs
I^g	Gross investment expenditures in 1954 dollars
K_t	Stock of capital in 1954 dollars
k'	Tax credit rate
k_i	Constants
k	Number of independent variables
L	Lag operator
M	Matrix characteristic roots of vector of $(I - \beta)$
m_1	Mean error
m_2	Mean absolute error
m_3	Mean square error
N	New orders
n	Number of observations in the forecast period
ou	Stock of unfilled orders
P	Unit price of output
P_k	Unit purchase price of capital stock
$(\ )^P$	"Permanent" component
Q	Level of output
q	Vector of exogenous variables $(y_t^* = A_1 q_t)$
q_p	Quit rate
R	Vector of relative input prices
r	Rate of interest (cost of capital)
S	Sales (shipments) in constant dollars
s_n	User cost of nonproduction worker
s_p	User cost of production worker
$(\ )^T$	"Transitory" component
T	Trend
V_p	Hiring cost per worker
W	Wealth
w_n	Hourly wage of nonproduction man-hours
w_p	Hourly wage of production man-hours
x	Level of output in constant dollars
Y_1	Stock of production workers
Y_2	Hours of work per production worker
Y_3	Capital stock (constant 1954 dollars)
Y_4	Rate of capital services per unit of capital stock
Y_5	Stock of inventories
Y_6	Stock of nonproductive workers
Y_7	Hours of work per nonproductive worker
Y_i^*	Desired input level
$\hat{Y}_t$	Forecast values of Y_t; $i = 1, \ldots, 6$

Symbol	*Meaning*
$\hat{\bar{Y}}_t$	Mean of $\hat{Y}_t$
$\bar{Y}_t$	Mean value of the dependent variable in the forecast range
y_t	Inputs
Z	Predicted sales
z	Present value of depreciation
α_i	Cobb-Douglas exponents (output elasticities)
β	Coefficient of adjustment
β_{ij}	Matrix of adjustment coefficients
γ	Return to scale parameter
δ	Capital depreciation rate
ε	Stochastic error term
ε'	Stochastic error term
λ	Characteristic roots of $(I - \beta)$
$\Theta(L)$	Polynomial function of L
$\Theta_{ij}(L)$	Polynomial function of L
μ_t	Vector of fixed depreciation rates
μ_0	Stochastic error term
ν	Vector of nominal input prices
ξ'	Elasticities of wage rate with respect to hours worked
ρ	First-order serial correlation coefficient
ω	Corporate income tax rate

APPENDIX E

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