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**Appendix A** Basic Tables on  
Gross National Product and  
Corporate Contributions,  
Income and Tax Rates,  
1936–1964

**APPENDIX TABLE I Corporate Contributions as Percentage of Gross National Product**

Year	<i>Gross National Product</i>		<i>Gifts and Contributions (Millions)</i>			<i>Implicit Price Deflator (1936= 100)</i>
	<i>Current Dollars (Billions)</i>	<i>1936 Dollars (Billions)</i>	<i>Current Dollars</i>	<i>1936 Dollars</i>	<i>Percentage of GNP</i>	
1936	\$ 82.5	\$ 82.5	\$ 30	\$ 30.0	.0364	100.0
1937	90.4	86.9	33	31.7	.0365	104.2
1938	84.7	82.5	27	26.3	.0319	102.8
1939	90.5	89.5	31	30.6	.0342	101.2
1940	99.7	97.1	38	37.0	.0381	102.8
1941	124.5	112.7	58	52.48	.0466	110.5
1942	157.9	127.3	98	79.0	.0621	124.1
1943	191.6	144.1	159	119.54	.0830	133.0
1944	210.1	154.4	234	171.7	.1112	136.3
1945	212.0	151.9	266	190.3	.1253	139.8
1946	208.5	133.6	214	137.0	.1025	156.2
1947	231.3	132.5	241	138.0	.1042	174.7
1948	257.6	138.4	239	128.2	.0926	186.4
1949	256.5	138.5	223	120.4	.0869	185.2
1950	284.8	151.9	252	134.2	.0883	187.8
1951	328.4	163.9	343	171.1	.1044	200.5
1952	345.5	168.9	399	194.7	.1153	204.9
1953	364.6	176.5	495	239.4	.1356	206.8
1954	364.8	174.0	314	149.7	.0860	209.8
1955	398.0	187.2	415	194.9	.1041	212.9
1956	419.2	190.7	418	189.9	.0996	220.1
1957	441.1	193.4	417	182.7	.0945	228.3
1958	447.3	191.2	395	168.7	.0882	234.2
1959	483.6	203.3	482	202.6	.0996	237.9
1960	503.8	208.5	482	199.3	.0956	241.9
1961	520.1	212.6	512	209.0	.0983	245.0
1962	560.3	226.6	595	240.4	.1061	247.5
1963	589.2	235.1	657	262.0	.1114	250.8
1964	628.7	246.9	729	285.9	.1160	255.0

SOURCES: *Gross National Product* and *Implicit Price Deflator*: U.S. Department of Commerce, *Survey of Current Business*, August, 1965, pp. 24-25; 52-53. *Corporate Gifts and Contributions*: U.S. Treasury Department, *Statistics of Corporate Income Tax Returns*, various years.

**APPENDIX TABLE II After-Tax Income of Corporations Reporting Net Incomes**  
(Dollar values in millions)

Year	Net Income After Taxes, After Gifts and Contributions <sup>a</sup>		Net After-Tax Cost of Gifts and Contributions		Net Income After Taxes, Before Gifts and Contributions <sup>b</sup>	
	Current Dollars	1936 Dollars	Current Dollars	1936 Dollars	Current Dollars	1936 Dollars
1936	\$ 8,571	\$ 8,571	\$ 23	\$ 23	\$ 8,594	\$ 8,594
1937	8,611	8,264	25	24	8,636	8,288
1938	5,907	5,746	19	18	5,926	5,765
1939	7,842	7,749	23	23	7,865	7,772
1940	8,917	8,674	22	21	8,939	8,696
1941	11,211	10,146	18	16	11,229	10,162
1942	12,155	9,795	31	25	12,186	9,820
1943	13,159	9,894	44	33	13,203	9,927
1944	12,566	9,219	68	40	12,634	9,269
1945	11,668	8,346	89	50	11,757	8,410
1946	18,672	11,954	131	64	18,803	12,038
1947	22,817	13,061	148	84	22,965	13,145
1948	24,788	13,298	146	85	24,934	13,377
1949	21,219	11,457	136	73	21,355	11,531
1950	27,459	14,621	100	53	27,559	14,675
1951	24,124	12,032	113	56	24,237	12,088
1952	22,192	10,831	143	70	22,335	10,900
1953	22,904	11,075	177	86	23,084	11,162
1954	23,822	11,355	148	71	23,970	11,425
1955	30,010	14,096	197	93	30,207	14,188
1956	30,308	13,770	198	90	30,506	13,860
1957	29,667	12,995	198	87	29,865	13,081
1958	26,404	11,274	184	79	26,588	11,353
1959	31,114	13,079	227	95	31,341	13,174
1960	30,685	12,685	228	94	30,913	12,779
1961	32,781	13,380	242	99	33,023	13,479
1962	35,883	14,498	283	114	36,166	14,613
1963	39,208	15,633	312	124	39,520	15,758
1964	45,800	17,961	362	142	46,162	18,103

SOURCE: *Corporation Net Income*: U.S. Treasury Department, *Statistics of Income, Corporate Income Tax Returns*, various years.

<sup>a</sup> Net taxable income, plus income from tax-exempt securities, minus income and excess-profits taxes, plus foreign tax credit. Includes investment credit in years 1962-1964.

<sup>b</sup> Net income after taxes, after gifts and contributions, plus net after-tax cost of gifts and contributions.

**APPENDIX TABLE III Gifts and Contributions as Percentage of After-Tax Income, Corporations Reporting Net Income (Dollar values in millions)**

Year	<i>Gifts and Contributions</i>		<i>Gifts and Contributions as Percentage of Income After Taxes:</i>		<i>Net Income Before Taxes<sup>a</sup></i>	
	<i>Current Dollars</i>	<i>1936 Dollars</i>	<i>After Gifts and Contributions</i>	<i>Before Gifts and Contributions</i>	<i>Current Dollars</i>	<i>1936 Dollars</i>
	1936	\$ 27	\$ 27.0	0.3150	.3142	\$ 9,726
1937	29	27.8	0.3368	.3358	9,848	9,451
1938	23	22.4	0.3894	.3881	6,725	6,542
1939	29	28.7	0.3698	.3687	9,028	8,921
1940	37	36.0	0.4149	.4139	11,406	11,095
1941	57	51.6	0.5084	.5076	18,316	16,576
1942	96	77.4	0.7878	.7878	24,343	19,616
1943	158	118.8	1.2007	1.1967	29,005	21,808
1944	233	170.9	1.8542	1.8442	27,357	20,071
1945	263	188.1	2.2540	2.2370	22,367	15,999
1946	211	135.1	1.1300	1.1222	27,385	17,532
1947	238	136.2	1.0431	1.0364	33,568	19,215
1948	236	126.6	0.9521	0.9465	36,430	19,544
1949	220	118.8	1.0368	1.0302	30,766	16,612
1950	250	133.1	0.9104	0.9071	44,356	23,619
1951	341	170.1	1.4135	1.4069	45,581	22,734
1952	396	193.3	1.7844	1.7730	40,705	19,866
1953	491	237.4	2.1437	2.1270	42,131	20,373
1954	309	147.3	1.2971	1.2891	39,957	19,045
1955	410	192.6	1.3662	1.3573	50,792	23,857
1956	413	187.6	1.3627	1.3538	50,674	23,023
1957	412	180.5	1.3887	1.3795	49,196	21,549
1958	383	163.5	1.4505	1.4405	44,148	18,851
1959	472	198.4	1.5170	1.5060	52,460	22,051
1960	475	196.4	1.5480	1.5366	51,327	21,218
1961	505	206.1	1.5405	1.5292	53,479	21,828
1962	590	238.4	1.6442	1.6314	57,416	23,198
1963	651	259.6	1.6604	1.6473	62,474	24,910
1964	723	283.5	1.5786	1.5662	70,094	27,488

<sup>a</sup> Net taxable income plus income from tax-exempt securities.

**APPENDIX TABLE IV Gifts and Contributions, Deficit, and Number  
of Corporations Reporting No Net Income  
(Dollar values in millions)**

Year	<i>Gifts and Contributions</i>		<i>Reported Deficit</i>		<i>Number of Corporations Reporting Deficit (Thousands)</i>
	<i>Amount, Current Dollars</i>	<i>Percentage of Total Corporate Contributions</i>	<i>Current Dollars</i>	<i>Percentage of Reported After-Tax Profit, Net Income Corporations</i>	
1936	\$ 3	10.0	\$1,707	19.86	276
1937	4	12.1	1,805	20.90	286
1938	4	14.8	2,395	40.42	301
1939	2	6.5	1,649	20.97	270
1940	1	2.6	1,855	20.75	252
1941	1	1.7	1,436	12.79	204
1942	2	2.0	663	5.44	173
1943	1	0.6	592	4.48	137
1944	1	0.4	577	4.57	124
1945	3	1.1	820	6.97	118
1946	3	1.4	1,786	9.50	132
1947	3	1.2	1,766	7.69	169
1948	3	1.3	1,685	6.76	198
1949	3	1.3	2,190	10.26	230
1950	2	0.8	1,310	4.75	203
1951	2	0.6	1,533	6.33	213
1952	3	0.8	1,697	7.60	229
1953	4	0.8	2,068	8.96	256
1954	5	1.6	2,852	11.90	282
1955	5	1.2	2,380	7.88	294
1956	5	1.2	2,771	9.08	326
1957	5	1.2	3,591	12.02	367
1958	12	3.0	4,266	16.04	379
1959	10	2.1	3,996	12.75	404
1960	7	1.5	5,833	18.87	470
1961	7	1.4	5,367	16.25	475
1962	5	0.8	5,406	14.95	485
1963	6	0.9	5,574	14.10	515
1964	6	0.8	5,601	12.13	515

SOURCE: U.S. Treasury Department, *Statistics of Income, Corporation Income Tax Returns*, various years.

**APPENDIX TABLE V Estimated Net After-Tax Cost or "Price" of \$1 in Contributions, Corporations with Net Income (Dollar values in millions)**

Year	Net Income of Corporations That Were:		Complement of Maximum Marginal Tax Rate		After-Tax Cost or "Price" of \$1 in Contributions
	Subject to Excess-Profits-Tax Liability	Not Subject to Excess-Profits-Tax Liability	Combined, Normal, Surtax and Excess-Profits Tax	Normal and Surtax Only	
1936	—	—	—	0.85	\$ .850
1937	—	—	—	0.85	.850
1938	—	—	—	0.81	.810
1939	—	—	—	0.81	.810
1940	\$ 3,920	\$ 7,283	0.26	0.76	.585
1941	11,109	7,002	0.09	0.69	.322
1942	17,475	6,577	0.20	0.60	.323
1943	22,751	5,967	0.20	0.60	.283
1944	21,044	6,080	0.20	0.60	.290
1945	14,645	7,520	0.20	0.60	.336
1946	—	—	—	0.62	.620
1947	—	—	—	0.62	.620
1948	—	—	—	0.62	.620
1949	—	—	—	0.62	.620
1950	26,858	17,283	0.28	0.58	.398
1951	24,946	20,387	0.1925	0.4925	.327
1952	16,813	23,619	0.18	0.48	.355
1953	16,793	25,026	0.18	0.48	.360
1954	—	—	—	0.48	.480
1955	—	—	—	0.48	.480
1956	—	—	—	0.48	.480
1957	—	—	—	0.48	.480
1958	—	—	—	0.48	.480
1959	—	—	—	0.48	.480
1960	—	—	—	0.48	.480
1961	—	—	—	0.48	.480
1962	—	—	—	0.48	.480
1963	—	—	—	0.48	.480
1964	—	—	—	0.50	.500

**APPENDIX TABLE VI Estimated Net After-Tax Cost of Reported Gifts and Contributions, and Net Cost as Percentage of After-Tax Income, Net-Income Corporations  
(Dollar values in millions)**

Year	Gifts and Contributions (Current dollars)	"Price" of \$1 in Contributions	Net After-Tax Cost of Reported Contributions		Net Income, After Taxes, Before Gifts and Contributions (Current dollars)	Net After-Tax Cost as Percentage of Net After-Tax Income
			Current Dollars	1936 Dollars		
1936	\$ 27	\$0.850	\$ 23	\$ 23	\$ 8,594	0.27
1937	29	0.850	25	24	8,636	0.29
1938	23	0.810	19	18	5,926	0.31
1939	29	0.810	23	23	7,865	0.30
1940	37	0.585	22	21	8,939	0.24
1941	57	0.322	18	16	11,229	0.16
1942	96	0.323	31	25	12,186	0.25
1943	158	0.283	44	33	13,203	0.33
1944	233	0.290	68	40	12,634	0.43
1945	263	0.336	89	50	11,757	0.59
1946	211	0.620	131	64	18,803	0.53
1947	238	0.620	148	84	22,965	0.64
1948	236	0.620	146	85	24,934	0.64
1949	220	0.620	136	73	21,355	0.63
1950	250	0.398	100	53	27,551	0.36
1951	341	0.327	113	56	24,237	0.46
1952	396	0.355	143	70	22,335	0.64
1953	491	0.360	177	86	23,081	0.77
1954	309	0.480	148	71	23,970	0.62
1955	410	0.480	197	93	30,207	0.66
1956	413	0.480	198	90	30,506	0.65
1957	412	0.480	198	87	29,865	0.67
1958	383	0.480	184	79	26,588	0.70
1959	472	0.480	227	95	31,341	0.72
1960	475	0.480	228	94	30,913	0.74
1961	505	0.480	242	99	33,023	0.73
1962	590	0.480	283	114	36,166	0.78
1963	651	0.480	312	124	39,520	0.79
1964	723	0.500	362	142	46,162	0.78

**Appendix B** Illustrative  
Computation of Net After-Tax  
Cost of Corporate Contributions

**APPENDIX TABLE VII Illustrative Computation of Average Net After-Cost  
or "Price" of \$1 in Corporate Contributions, 1953**

<i>Net Income Class</i>	<i>Net Cost of \$1 in Contributions</i>	<i>Total Net Income (Deficit) (Millions)</i>	<i>Total Gifts and Contributions (Thousands)</i>
Zero or negative net income	\$1.00	(\$ 2,335)	\$ 3,880
Positive net income			
\$0 to \$25,000	0.70	2,296	
\$25,000 and over			
No excess-profits tax	0.48	22,731	
Excess-profits tax	0.18	16,793	
			} 490,637

*Method of computing average net cost of contributions  
for corporations with net income*

<i>Weight (income)</i>	<i>"Price"</i>	<i>Product</i>
\$25,027	× 0.48	= \$12,012
16,793	× 0.18	= 3,023
<u>\$41,820</u>		<u>\$15,035</u>
Average "Price" = $\frac{\$15,035}{\$41,820}$		= .360

**ASSUMPTIONS:**

1. Corporations with net income of less than \$25,000 gave the same percentage of income as those with incomes greater than \$25,000 but not in the excess-profits category. This, even though "price" of giving is much higher for the former group. The justification is that corporations with less than \$25,000 in net income accounted for a sufficiently small percentage of contributions and income that differences in giving rates would have negligible effect on the average. In the period 1950 to 1963, these under-\$25,000 corporations accounted for between 4.9 and 7.3 per cent of the total net income of corporations with net income.
2. Corporations liable for the excess-profits tax gave the same percentage of income as those liable only for the ordinary corporate income tax. This, even though the "price" of giving was much lower for the excess-profits-tax group. This assumption surely leads to an overstatement in the average "price" in those years when the excess-profits tax applied to corporations accounting for a large percentage of corporate net income. In 1953, for example, this assumes that, of the \$491 million in contributions made by corporations with a net income, \$197 million or only 40 per cent was made by corporations liable for excess-profits taxes, as this was their share of corporate net income.

**APPENDIX TABLE VIII Estimate of Hypothetical 1963 Contributions by Corporations on the Assumption of the Same Net After-Tax Percentage of Income That Was Given in 1936-1939 (Dollar values in millions)**

	<i>Actual, 1936-39 Average</i>	<i>Actual, 1963</i>	<i>Hypothetical, 1963, Assuming Same Net After-Tax Sacrifice of 1936-39</i>
<i>Corporations with Net Income</i>			
1. Net income before taxes (1936 dollars)	\$8,660	\$24,910	\$24,910
2. Net income after taxes, after gifts and contributions (1936 dollars)	7,583	15,633	15,712
3. Gifts and contributions (1936 dollars)	26.5	259.6	95.8
4. Net after-tax cost of \$1 in giving	0.83	0.48	0.48
5. Net after-tax cost of gifts and contributions (1936 dollars) (3) × (4)	22	125	46
6. Net income after taxes but before gifts and contributions (1936 dollars) (2) + (5)	7,605	15,758	15,758
7. Net after-tax cost of gifts and contributions as percentage of net income after taxes but before gifts and contributions (5) ÷ (6)	0.29	0.79	0.29
Gifts and contributions, 1963 dollars (3) × 2.508		651	240
Add: Contributions of corporations with no net income		<u>6</u>	<u>6</u>
		657	246

**Appendix C** Regression  
Coefficients Relating Corporation  
Giving to Successively Larger  
Numbers of Explanatory  
Variables, Based on Time-  
Series Data (Data, logarithmically  
transformed, are for the period  
1936–1963; T-ratios given in  
parentheses)

APPENDIX TABLE IX Scale Elasticity Coefficients

Constant Term	Scale Variables		Price Variables		Tax-Change Expectations <i>E</i>	Trend <i>T</i>	Adjusted R-Squared	Von Neumann Ratio
	$\text{Log}_e Y$	$\text{Log}_{10} Y_{t-1}$	$\text{Log}_{10} P$	$\text{Log}_{10} P_{t-1}$				
-7.52	2.37 (6.26)					0.022 (3.07)	0.60	1.07
-2.33	1.01 (1.83)					0.021 (4.06)	0.70	0.59
-0.13	0.82 (1.98)		-0.85 ( 4.52)			0.016 (4.57)	0.83	0.71
-0.66	1.05 (3.83)			-1.03 ( 8.63)		0.012 (4.47)	0.93	2.07
-1.19	1.13 (4.31)		0.28 (1.24)		0.08 (2.33)	0.012 (4.47)	0.94	1.79
-2.44	0.97 (3.65)	0.46 (1.72)	0.34 (1.58)	-1.26 ( 6.59)	0.08 (2.44)	0.012 (3.32)	0.94	1.93

APPENDIX TABLE X Profitability Elasticity Coefficients

Constant Term	Income Variables		Net Worth		Price Variables		Trend <i>T</i>	Adjusted R-Squared	Von Neumann Ratio
	$\text{Log}_e Y$	$\text{Log}_{10} Y_{t-1}$	$\text{Log}_{10} \text{NW}$	$\text{Log}_{10} P$	$\text{Log}_{10} P_{t-1}$				
-8.78	2.20 (4.58)		0.39 (0.61)				0.048 (4.99)	0.59	1.02
12.35	0.51 (1.06)		-2.57 ( 3.44)				0.046 (7.76)	0.79	1.08
13.42	0.36 (1.22)		-2.39 ( 5.23)		-0.81 ( 6.28)		0.029 (5.24)	0.92	1.20
6.01	0.81 (3.17)		-1.20 ( 2.81)			-0.90 ( 7.86)	0.034 (5.50)	0.94	2.64
8.17	0.67 (2.55)		-1.52 ( 3.29)		-0.29 ( 1.55)		0.033 (4.03)	0.95	2.25
7.83	0.66 (2.46)	0.04 (0.14)	-1.48 ( 2.68)		-0.28 ( 1.30)		0.033 (4.03)	0.94	2.26





**APPENDIX TABLE XIII Matrix of Simple Correlation Coefficients for Regressions Based on Time-Series Data, Presented in Appendix Tables IX through XII**

	After-Tax Income (Scale)		"Price"		Net Worth Current Year (log <sub>10</sub> ) X <sub>8</sub>	Tax-Change Expectations X <sub>7</sub>	Trend X <sub>8</sub>
	Current Year (log <sub>10</sub> ) X <sub>6</sub>	Preceding Year (log <sub>10</sub> ) X <sub>5</sub>	Current Year (log <sub>10</sub> ) X <sub>1</sub>	Preceding Year (log <sub>10</sub> ) X <sub>5</sub>			
X <sub>1</sub>							
X <sub>2</sub>	1.000						
X <sub>3</sub>	+ .781						
X <sub>4</sub>	+ .770	1.000					
X <sub>5</sub>	- .513	- .268	1.000				
X <sub>6</sub>	- .666	- .210	+ .778	1.000			
X <sub>7</sub>	+ .530	+ .548	- .097	- .046	1.000		
X <sub>8</sub>	+ .112	+ .068	- .373	- .034	+ .080	1.000	
X <sub>9</sub>	+ .826	+ .794	- .165	- .272	+ .860	0.000	1.000

## Appendix D

**APPENDIX TABLE XIV Matrix of Simple Correlation Coefficients for Regression Equations Based on Cross-Sectional Data, Presented in Text Table 14**

	Contri- butions $Log_{10}$ $X_1$	Number of Corporations $Log_{10}$ $X_2$	Pre-Tax Profits $Log_{10}$ $X_3$	Net Worth $Log_{10}$ $X_4$	Employ- ment $Log_{10}$ $X_5$	Officers' Compensation $Log_{10}$ $X_6$	Dividends $Log_{10}$ $X_7$	After-Tax Profits $Log_{10}$ $X_8$
$X_1$	1.000							
$X_2$	+ .516	1.000						
$X_3$	+ .776	+ .428	1.000					
$X_4$	+ .740	+ .420	+ .903	1.000				
$X_5$	+ .680	+ .637	+ .657	+ .664	1.000			
$X_6$	+ .477	+ .843	+ .615	+ .672	+ .644	1.000		
$X_7$	+ .854	+ .286	+ .871	+ .885	+ .597	+ .455	1.000	
$X_8$	+ .818	+ .411	+ .921	+ .950	+ .669	+ .620	+ .955	1.000

## Appendix E Comparison of Nelson and Schwartz Analyses of the Determinants of the Growth in Corporate Giving

A STATISTICAL examination of the income and price elasticities of giving has been made by Mr. Robert A. Schwartz as part of a doctoral dissertation at Columbia University.\* Mr. Schwartz uses the same general approach, draws data from the same sources, and covers roughly the same time period as the present study. His analysis differs in significant respects from the present one, however, with important differences in findings. The two studies will here be compared to examine the effects of the two approaches and to determine which one might be regarded as providing more valid interpretation of the historical record.

### *The Giving and Income Variables*

As shown in Appendix Table XV, the measure of giving or income adopted by Schwartz is the average per corporation, profit and loss corporations combined. The measure adopted by Nelson is the aggregate giving or income of all profit corporations taken as a group. An examination of time patterns in the several series led Nelson to the conclusion that the correlation measures would be more directly indicative of the effects being measured, and contain less statistical "static," if the aggregate measures were used.

For one thing, the measure based on averages provides an ambiguous description of how the size of the typical corporate giver has changed over time. One source of this ambiguity is the year-to-year

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\* "Private Philanthropic Contributions—An Economic Analysis," 1966. Schwartz's chapter on corporation giving has been revised and published as "Corporate Philanthropic Contributions," *Journal of Finance*, June, 1968, pp. 479-497. The statistical results are unchanged from those presented in the dissertation and examined here.

**APPENDIX TABLE XV Comparison of Nelson and Schwartz Analyses of the Determinants of the Growth in Corporate Giving**

	<i>Nelson</i>	<i>Schwartz</i>
Time period covered	1936-1963	1936-1961
Treatment of income variable	Aggregate after-tax income of corporations with net income, deflated for price level changes	Average after-tax income per corporation, profit and loss corporations combined, deflated for price level changes
Treatment of "price" variable	Complement of marginal tax rate, corporations with net income; in excess-profits tax years, weighted average of complements of normal and excess-profits tax marginal rates	Complement of average tax rate, for net income corporations, averaged with price of 100% for loss corporations
Treatment of giving variable	Aggregate gifts and contributions of corporations with net income, deflated for price level changes	Average gifts and contributions per corporation, profit and loss corporations combined, deflated for price level changes

changes in the total number of corporations. Such changes mainly reflect the creation and dissolution of large numbers of small corporations, and reflect "demographic behavior" unrelated to movements in giving. These incidental population changes, for present purposes the equivalent of statistical errors, serve more to obscure the underlying income-giving relationship than to illuminate it.

Based on data expressed on an average per corporation, the Schwartz study found a negative secular trend in both the income and giving series. The decline probably reflects, in the main, the proliferation of small corporations over the period, and not a shift in the size distribution among the larger corporations that account for the preponderance of contributions.

The present study uses data for corporations with net incomes only. The Schwartz study used data for all corporations, including those reporting losses. Examination of the detailed data indicated that the inclusion of loss corporations would introduce spurious short-term and secular movements into the data, and would be especially troublesome in interpreting analyses based on averages. While accounting

for less than 2 per cent of total contributions, the relative effect of loss corporations on other magnitudes was much greater. From 1940 through 1963, they ranged from 27 to 53 per cent of the number of corporations in a given year, and offset the income of profitable corporations by total loss that ranged from 4 to 21 per cent of total positive income. (See *Chart C* in *Chapter 2*.) The trend in loss offset contributed to the decline in average income observed in the Schwartz data, rising from an average of 6.1 per cent in 1940–1945 to 16.0 per cent in 1960–1963.

### *The "Price" Variable*

The net after-tax cost of a given amount of contributions is determined by the marginal tax rate to which the corporation is subject. As explained in *Chapter 3*, contributions are thus made at one of several "prices," depending on the tax status of the corporation. Ideally, the price index would be computed as weighted average of the several prices, each weighted by the amount of contributions made at each price. Unfortunately the data are not classified in a manner which would permit this.

The Nelson price variable retains the marginal tax-rate basis for evaluation, while using a weighting system based on the income of corporations subject to the several tax rates. As explained in *Appendix Table VII*, this treatment understates, probably to a minor degree, movements in the effective "price" of giving. The Schwartz price variable is based on the average tax rate and, as such, substantially understates the movement in the effective "price" of giving, particularly during periods when the excess-profits tax was faced by changing numbers of corporations.

The differing treatments by Nelson and Schwartz produce significantly different measures of income and price elasticity. A regression, using logarithmically (base 10) transformed variables was run which, except for a slight difference in the time period covered and the addition of a trend variable, reproduced the relevant one presented by Schwartz. A comparison of the two sets of elasticities is presented in tabular form below:

	<i>Income</i>		<i>Price</i>	
	<i>Nelson</i>	<i>Schwartz</i>	<i>Nelson</i>	<i>Schwartz</i>
Measure of elasticity	+0.80	+0.63	-0.89	-2.00
Variance in explanatory variable	.0104	.0169	.0199	.0079

The lower measure of income elasticity produced by Schwartz reflects the greater variance in his income variable. As mentioned above, this in turn reflects the spuriously high variability introduced into the income variable by expressing income on a per-corporation basis. Changes in the business population, largely unrelated to giving behavior, thus become a factor serving to reduce the measure of income elasticity.

The high price elasticity found by Schwartz ( $-2.00$ ) reflects the low variance in his price variable, because, as would be expected, the average tax rate showed much lower variability than the marginal tax rate. The higher variance in the Nelson price variable, on the other hand, produced a lower measure of price elasticity. The influence of tax rates on giving, while appreciable, probably did not demonstrate the degree of short-run responsiveness implied by the very high elasticity coefficients presented in the Schwartz analysis.

Finally, the Schwartz analysis found no relationship between giving and time-related factors other than income and price. This result could have been predicted, given the fact that both per-corporation income and giving showed flat to slightly declining time patterns over the period. But, as shown above, much of the flatness in trend can be attributed to the effect on the averages of loss corporations, a group accounting for only a minute share of giving. Were only profit corporations included in the analysis—and with some adjustment for effects of population changes among small corporations—the Schwartz analysis might well have found (as did the Nelson analysis) that time-related factors other than income and price made a significant separate contribution to the growth in giving.

## **Appendix F**

APPENDIX TABLE XVI The Contributions Dollar

	1965		1962		1959		1955 <sup>a</sup>		1947	
	540 Companies	% of Total	465 Companies	% of Total	280 Companies	% of Total	180 Companies	% of Total	71 Companies	% of Total
Health and welfare										
Federated drives: United Funds and the like	50,558	24.2	39,280	25.5	25,450	25.1	8,378	21.9	6,118	38.0
National health agencies (not included above)	3,176	1.5	2,183	1.4	1,520	1.5	497	1.3	—	—
National welfare agencies (not included above)	4,043	1.9	4,114	2.7	3,340	3.3	—	—	—	—
Hospitals										
Capital grants	17,172	8.2	9,369	6.1	9,330	9.2	3,290	8.6	2,093	13.0
Operating grants	2,018	1.0	1,016	0.7	1,410	1.4	—	—	—	—
Other local health and welfare agencies	5,301	2.5	5,140	3.3	2,830	2.8	—	—	—	—
Capital grants (excluding hospitals)	4,653	2.2	2,002	1.2	1,820	1.8	—	—	—	—
TOTAL	86,921	41.5	63,104	40.9	45,700	45.1	19,397	50.7	10,626	66.0
Education										
Higher education										
Scholarships	10,569	5.0	7,832	5.1	4,860	4.8	1,071	2.8	—	—
Fellowships	4,715	2.3	4,271	2.8	4,050	4.0	994	2.6	—	—
Research grants (not treated as a business expense)	5,073	2.4	4,040	2.6	3,440	3.4	1,262	3.3	—	—
Capital funds	15,180	7.3	9,695	6.3	9,930	9.8	2,257	5.9	—	—
Direct unrestricted grants	20,487	9.8	18,813	12.2	8,010	7.9	2,027	5.3	—	—
Grants to state, area and national fund-raising groups	7,068	3.4	4,791	3.1	2,830	2.8	573	1.5	—	—

Education-related agencies	3,741	1.8	1,793	1.2	1,310	1.3	—	—	—
Other	8,513	4.1	9,740	6.3	3,340	3.3	3,596	9.4	—
Secondary education									
Capital grants	765	0.4	537	0.3	100	0.1	191	0.5	—
Other	4,233	2.0	3,019	2.0	1,720	1.7	—	—	—
TOTAL	80,344	38.4	64,531	41.9	39,590	39.1	11,975	31.3	2,254
14.0									
Culture (cultural centers, performing arts, museums, etc.) <sup>b</sup>									
Operating funds	3,332	1.6	—	—	—	—	—	—	—
Capital grants	2,501	1.2	—	—	—	—	—	—	—
TOTAL	5,833	2.8	—	—	—	—	1,224	3.2	—
Civic causes (municipal and community improvement, good government and the like)									
TOTAL	12,099	5.8	8,239	5.3	2,940	2.9	—	—	—
Other									
Religious causes	1,053	0.5	589	0.4	400	0.4	191	0.5	—
Groups devoted solely to economic education	1,788	0.9	1,756	1.1	1,520	1.5	803	2.1	—
Groups in U.S. whose principal objective is aid to other countries	7,868	3.8	2,726	1.8	500	0.5	114	0.3	—
Causes other than above	8,474	4.0	10,856	7.1	7,200	7.1	1,759	4.6	—
TOTAL	19,183	9.2	15,927	10.3	9,630	9.5	2,869	7.5	3,220
20.0									
Dollars not identifiable because donee is unknown	4,916	2.3	2,341	1.5	3,540	3.5	2,792	7.3	—
GRAND TOTAL	209,296	100.0	154,142	100.0	101,400	100.0	38,260	100.0	16,100
100.0									

NOTE: Summary worksheets supplied by John H. Watson III, Manager of Company Contributions, National Industrial Conference Board.

<sup>a</sup> The breakdown of the contributions dollar for the years 1947 and 1955 was less refined than for subsequent years. As a consequence, distribution of gifts within major areas of support is incomplete.

<sup>b</sup> Culture and Civic Causes were not tabulated separately prior to 1965.



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