Political Influence Efforts in the US Through Campaign Contributions and Lobbying Expenditures: An Index Approach

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Key Points

- Efforts to influence legislation by industry interest groups may be good or bad for the economy as a whole, but industries with relatively high levels of political spending may be more heavily engaged in rent-seeking.
- Using data on campaign contributions and lobbying expenditures compiled by OpenSecrets, scaled to industry gross output, the authors create a new dataset on campaign contributions and lobbying expenditures, including annual political influence indexes for 60 sectors of the US economy, from 2003 to 2020.
- Indexes and the underlying data on campaign contribution and lobbying expenditures for two sectors, farms and nursing and residential care facilities, provide examples of how theses indexes and the supporting data can be used to explore the causes of changes in a sector's political influence efforts over time.
- The indexes also show how industries differ with respect to their investments in campaign contribution and lobbying expenditures.

Efforts by private-sector entities, nongovernment organizations, and other interest groups to exert political influence are pervasive in American politics, as they are in Australia, Canada, France, the United Kingdom, and other high-income democracies. Such efforts are also found in more autocratic societies such as China and Russia. However, legalized forms of political influence such as campaign contributions and lobbying efforts are more widespread in well-established democracies such as the United States.[1]

Importantly, efforts to influence political and administrative decisions can be good or bad, but either way, understanding the extent to which individual sectors of the economy engage in efforts to affect policy and regulatory initiatives is of interest. In this report, using publicly available information on federal campaign contributions and lobbying expenditures associated with individual sectors of the economy, we construct a set of political influence effort indexes for 60 sectors of the United States economy.

The indexes are estimated using publicly available data, compiled by OpenSecrets from public sources, on federal campaign contributions and expenditures on lobbying efforts, divided by each sector's gross value of output, for each year from 2003 to 2020.[2] Thus, for each sector in each year, we obtain an estimate of the dollars spent on political influence efforts at the federal level per million dollars of sector gross output. Index values are obtained by dividing each sector's outlays by average outlays per million dollars of output among the entire 60 sectors (that is, total spending on campaign contributions and lobbying divided by total output for all 60 sectors). An index value of one for a given sector indicates that the sector's efforts to exert political influence through lobbying and campaign contributions are representative of economy-wide efforts. A value of two indicates that a sector is investing twice as much as the average amount among all industries; an index value of 0.5 indicates the sector's expenditures are half the average amount.

Background

In one of the earliest studies of political influence and the role of lobbying, Samuel Finer argued that efforts to influence legislation by interest groups are both good and bad.[3] Lobbying efforts by nongovernment and private-sector organizations, single-issue groups, and individuals to influence government decisions often benefit the efficient development of effective policies and regulations and play a crucial role in democracies. For example, absent inputs from industry, scientific, and nongovernment organizations and other groups, product standards could well be meaningless, adopted health care therapies could be counterproductive, and populations experiencing dire poverty and other harms could be ignored.

In fact, a primary reason for concern about any autocratic regime (whether run by Xi Jinping, Vladimir Putin, or Donald Trump) is the tendency of top-down governments to ignore or be completely ignorant of information that would lead to more informed decisions that would be useful for the community as a whole. Lobbying activities are therefore important and often beneficial, whether they take the form of science advisory committees providing evidenced-based information on health care therapies or agricultural interest groups bringing attention to potentially devastating animal and crop diseases.

Lobbying and exerting political influence through campaign contributions also have a well-documented flip side. Too frequently, the major or even sole purpose of both activities is to obtain policies and regulations that benefit the members of a well-defined, often small interest group at the expense of the rest of society. The beneficiaries may be members of a single family, 3,000–4,000 sugarcane and sugar beet growers, or organizations such as AARP lobbying on behalf of millions of retirees for more favorable Medicaid subsidies.

The vehicle through which political influence is exerted may be a promise to deliver substantial blocks of voters (farmers in Kansas or union members in the auto industry). It could also be an outright bribe or an assurance to legislators or bureaucrats of future employment at lucrative salaries. However, lobbying activities and campaign contributions are also important and can be measured with some degree of accuracy.

Campaign Contributions and Lobbying Expenditures as Measures of Political Influence

Campaign contributions provide candidates with access to the media and other ways of influencing voters. Lobbying allows for direct access to decision makers. The focus may be members of Congress who largely determine how legislation will be framed or key administrators in departments and agencies that establish rules and regulations through which policy decisions are implemented. The extent to which individual sectors of the economy invest in both activities is therefore one indicator of differences in political influence efforts among various sectors of the US economy.

However, campaign contributions and lobbying expenditures, even if precisely estimated, are only partial and in several ways incomplete measures of industry efforts to exert political influence. The ability of groups within a sector (e.g., teachers union members, steelworkers, or AARP members) to deliver large blocks of votes is also an important source of political influence. Other things equal, interest groups that can deliver such blocks of votes may

need to invest less in campaign contributions or direct lobbying to accomplish their policy objectives.[4]

Some industries may also have natural allies in the federal government (for example, groups that supply products required for military purposes that work closely with the Defense Department).[5] Companies in such sectors may also provide fewer resources to campaign contributions and lobbying efforts than might otherwise be the case, or with campaign contributions, they may be prohibited from making some donations.

Expenditures on lobbying and campaign contributions also may not always be directly linked to impacts on policy and regulatory outcomes. Different groups in a sector do not always speak with a single voice on legislative issues. For example, groups representing construction workers may seek more occupational health and safety regulations, while groups representing construction businesses may argue that the current regulatory framework is adequate or unnecessarily burdensome. As a result, despite substantial expenditures on lobbying and campaign contributions by both groups, neither group may have much effective influence on policy outcomes. For example, when different companies compete for the same defense contracts or different universities for the same pots of research funds, lobbying expenditures and campaign contributions from the relevant sector are likely to increase, with no obvious impacts on outcomes.

Thus, by themselves, federal campaign contributions and lobbying expenditures are not necessarily accurate measures of the extent to which a sector can exert political influence. Nevertheless, they do provide evidence of the extent to which different sectors engage with the federal policy process.

The Political Influence Indexes: Data Sources and Limitations

The industry-specific indexes for which values are estimated are based entirely on publicly available data reported by four federal sources. The Federal Election Commission reports campaign contributions. Firms and organizations employing lobbyists submit expenditures on lobbying, and the Senate Office of Public Records publishes them quarterly. The Bureau of Economic Analysis (BEA) reports annual calendar year data on the value of industry output. Campaign contributions and lobbying expenditures by unions are assigned to industries proportionally based on union membership by industry using US Census Bureau data.

OpenSecrets compiles the information on individual campaign contributions and lobbying expenditures by companies and lobbying firms and provides the public access to all the data. Individual observations on lobbying expenditures are placed into annual "baskets" (spending in 2003, 2004, etc.). OpenSecrets places individual observations on campaign contributions into two-year "baskets," corresponding to the duration of individual Congresses (e.g., 2003–04 under the 108th Congress and 2019–20 under the 116th Congress). However, the information on each campaign contribution includes the date on which the contribution is made, and this information is used to allocate those contributions to a specific year. In the entire sample of observations on campaign contributions, a small number of donations may have been allocated to an incorrect year, but to the extent such errors may exist, they account for only 0.15 percent of all contributions over the entire period.[6]

Matching annual campaign contributions and lobbying expenditures to the output of each sector involves linking data on campaign contributions and lobbying expenditures categorized by OpenSecrets. This is loosely based on the Standard Industrial Classification (SIC) code system,[7] with data on the value of industry output as reported by the BEA based directly on the North American Industry Classification System (NAICS) that replaced the SIC code system in 1997.[8] The BEA reports sector- and industry-specific data at five levels of aggregation (A through E).[9]

SIC code and NAICS industry definitions are used to map campaign contributions and lobbying expenditures defined by the OpenSecrets industry codes into the BEA industry classification codes by name and industry definition. Thus, campaign contributions and lobbying expenditures can be allocated to 60 different sectors of the economy, as defined by the BEA (mostly corresponding to NAICS's three-digit industries).[10]

Union contributions and lobbying expenditures are allocated to specific industries as follows. Total outlays on campaign contributions and lobbying expenditures were available only for all unions.

These outlays are then allocated to each of the relevant industries based on the proportion of the membership of all unions employed in each industry.[11]

Contributions by political action committees (PACs) are also reported in the OpenSecrets database and, as with other forms of contributions, generally assigned to specific industries. Spending by PACs not associated with an industry (e.g., social issue–oriented PACs) is excluded. An individual's contributions are allocated to the industry of the company that employs the individual. However, to avoid double counting, an individual's contributions to such PACs are not included in constructing the political influence indexes.

In addition, contributions from individuals with no listed employer (e.g., homemakers, students, and candidates contributing to their own campaigns) are omitted. The extent to which these exclusions could affect estimated expenditures and index values for a specific industry is difficult to assess, but, on a relative basis among sectors, it seems likely to be small and result in underestimates of industry-specific campaign contributions.

Expenditures on lobbying by industry are also underestimated—but for a different reason. Under the 1995 Lobbying Disclosure Act, as subsequently amended, lobbying firms are required to submit quarterly good-faith estimates of all lobbying-related income from their clients but do not have to report such expenditures if they are less than $3,000.[12] Thus, lobbying expenditures are systematically underestimated for every industry, but it is not clear whether this results in significant under- or overestimates of the extent to which specific industries invest in political influence efforts compared to other sectors.

The Political Influence Indexes: Estimation Methods

Political influence indexes are constructed for the 60 industries using the data and attribution methods described in the previous section for each year from 2003 to 2020. All dollar-denominated measures of industry output and political influence spending are converted from nominal to real 2020 dollars using the Personal Consumption Expenditures Price Index.[13]

In computing the political influence index for each industry, to account for differences in industry size, first total industry-specific spending on political influence in each year is divided by the dollar value of that sector's output in that year, as reported by the BEA. This approach yields estimates of political influence intensities in the form of dollars per year spent on campaign contributions and lobbying per million dollars of industry output. These annual values range from as little as $10 per million dollars of output to well over $600 per million dollars of output.

The annual index value for each industry is estimated as follows. Each sector's index value is defined as the ratio of the sector's spending on campaign contributions and lobbying efforts per million dollars of output to the average amount per million dollars of output spent across all industries (defined as total spending by all 60 sectors on campaign contributions and lobbying divided by the total value of gross output from all 60 sectors).

For example, if an industry spends $90 per million dollars of output and the average amount across all 60 sectors is $120 in the same year, then the industry's political influence index value for that year is 0.75. Thus, adjusting for the size of the industry, per unit of output, the sector spent 25 percent less than the average for the 60 sectors as a whole.

In any given year, the value of the political influence index for all 60 sectors will always be one. For example, if the average spent across all 60 sectors is $120, the index for all sectors equals $120 divided by $120, or one.[14] Thus, the index for each sector readily provides information about that industry's political influence efforts relative to the average for all 60 sectors.

Political Influence Indexes: Two Examples

To illustrate the potential use and limitations of sector-specific political influence indexes, we present and discuss annual index value estimates and the underlying data used in their construction for two sectors: the farm sector and the nursing and residential care facilities (NRCF) sector.[15] The comparison is of interest because compared to the average size of the 60 sectors as measured by value

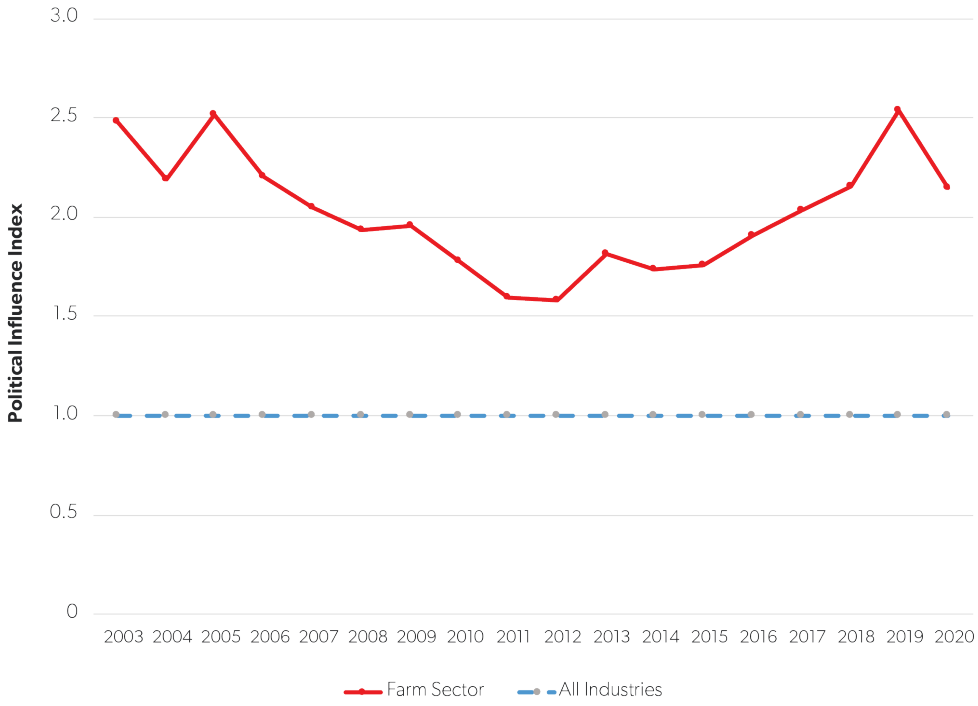
of gross output, both the farm and NRCF sectors are relatively small, respectively producing 83 percent and 49 percent of average gross output across all 60 sectors between 2003 and 2020. One reason to select sectors of somewhat similar size for comparison is that economies of scale could affect political influence spending because of fixed costs, although the evidence of such effects indicates they are modest.[16]

Figure 1 shows the farm sector's annual political index value, Figure 2 shows campaign contribution and lobbying expenditures per million dollars of sector output, and Figure 3 shows both total sector-level spending on political influence and the sector's total value of output. In addition, Figure 4 shows total political influence spending broken down by campaign contributions and lobbying expenditures. As benchmarks, Figure 1 includes the average political index value for all 60 sectors (always equal to one, as discussed above), and Figure 2 shows average campaign contribution and lobbying expenditures per million dollars of output across all 60 sectors.

The farm sector's political index values reported in Figure 1 are consistently higher than the average across all 60 sectors, ranging from a low of 1.58 in 2012 (158 percent of the overall average) to a high of 2.54 (254 percent of the overall average), with an annual average value of 1.98 (198 percent of the overall average). Between 2003 and 2020, the average political index value for the farm sector ranks 13th highest among all 60 sectors. In terms of political influence spending per million dollars of sector output, as illustrated in Figure 2, in real terms (with expenditures adjusted to 2020 dollars) the average annual outlay across all 60 sectors ranges from $114 in 2005 to $195 in 2012 (a presidential election year). Annual outlays per million dollars of output for the farm sector ranged from $224 in 2013 to $350, peaking in 2016 (also a presidential election year), and averaged $288 over the entire 18-year period.

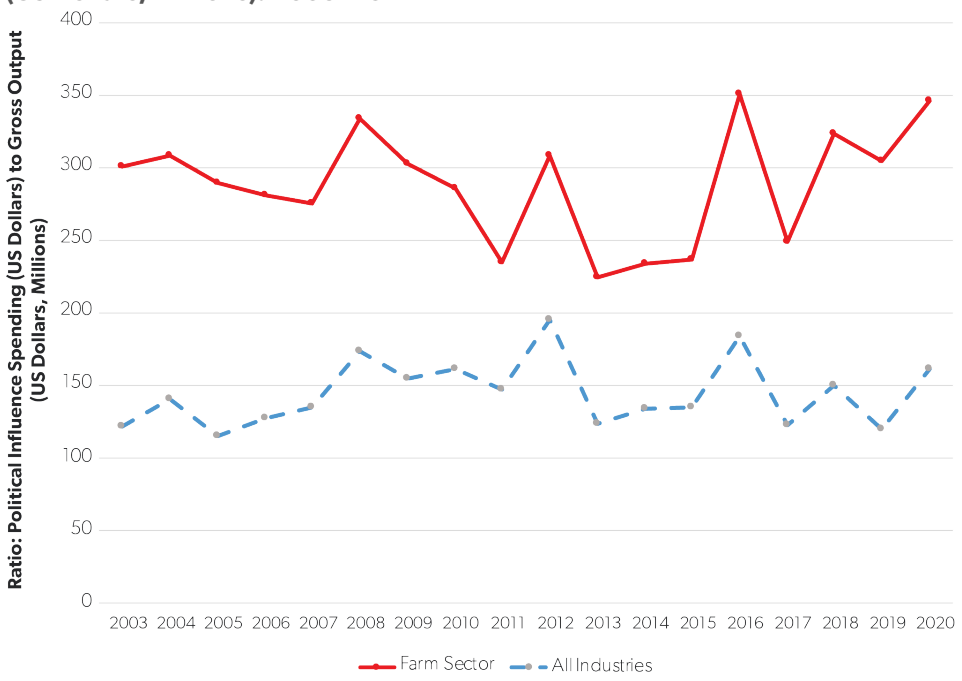
Changes in the political influence index from one year to the next may occur because either campaign contributions and lobbying expenditures have changed or industry output has changed—or

Figure 1. Farm-Sector Political Influence Index: 2003–20



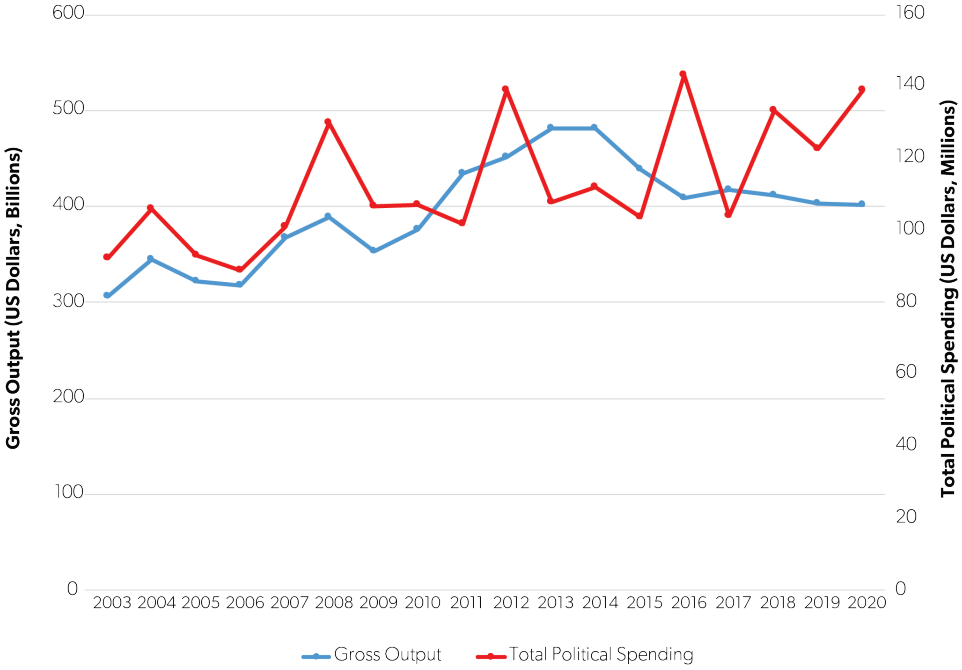
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Figure 2. Ratio of Farm-Sector Political Spending (US Dollars) to Gross Output (US Dollars, Millions): 2003–20



Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Figure 3. Farm-Sector Gross Output (US Dollars, Billions) and Political Spending (US Dollars, Millions): 2003–20



Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Figure 4. Farm-Sector Federal Political Spending (US Dollars, Millions): 2003–20

Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

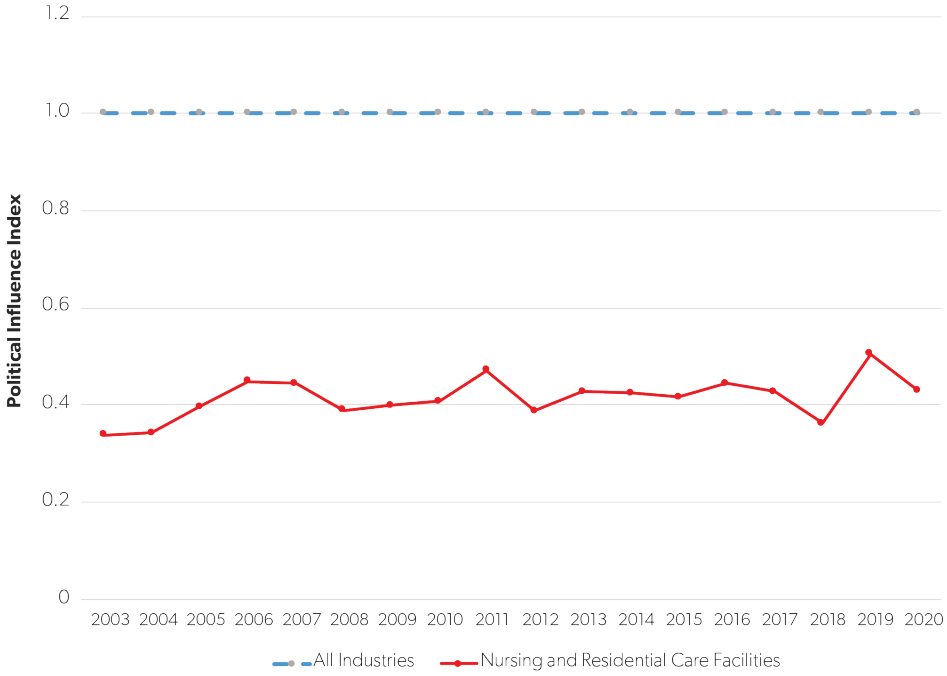
because both have changed. Annual total farm-sector contributions and total farm-sector output are shown in Figure 3. For example, between 2009 and 2010, in real (inflation-adjusted) terms, total political influence spending was stable (changing from $106.8 million to only $107.2 million), but industry output increased from $375 billion to $434 billion as prices for some livestock and crops surged. As a result, the farm sector's political influence index declined from 1.95 to 1.78 as campaign contributions and lobbying expenditures per million dollars of output subsequently fell from $302 to $285, even though the industry's political influence efforts had not measurably changed.

Finally, as shown in Figure 4, in inflation-adjusted terms, farm-sector expenditures on lobbying efforts have been relatively stable. Such expenditures ranged from $76.2 million in 2003 to $86.4 million in 2012 and $86.7 million in 2013, a two-year period during which congressional members were heavily engaged in developing a new farm bill that was eventually passed in early 2014.[17] In inflation-adjusted terms, farm-sector campaign contributions have been much more volatile, spiking sharply in presidential election years (2004, 2008, 2012, especially 2016, and 2020) and more modestly in midterm congressional election years. There has also been a clear upward trend. For example, farm-sector campaign contributions amounted to $29 million (in 2020 dollars) in 2004, a presidential election year, but $58 million (in 2020 dollars) in 2020, an increase of 100 percent.

In contrast to the farm sector, political index values for the NRCF sector, shown in Figure 5, are consistently lower than the average across all 60 sectors, ranging from a low of 0.34 in 2003 (34 percent of the overall average) to a high of 0.50 (50 percent of the overall average), with an annual average value of 0.43 (43 percent of the overall average). The average political index value for the NRCF sector ranks 47th among all 60 sectors. Annual outlays per million dollars of output for the NRCF sector, reported in Figure 6, ranged from $41 in 2003 to $82 in 2016, peaking in that year, as did farm-sector spending at $350, and averaged $60 over the entire 18-year period.

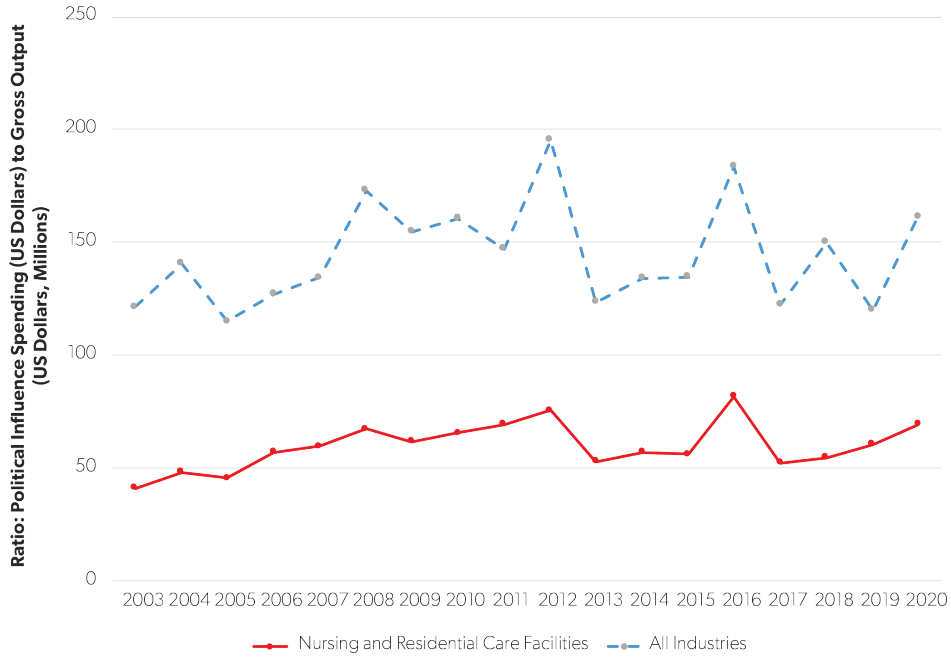
As discussed above, changes in a sector's political index value from one year to the next can occur

Figure 5. NRCF Political Influence Index: 2003–20



Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Figure 6. Ratio of Political Spending (US Dollars) to Gross Output (US Dollars, Millions): 2003–20



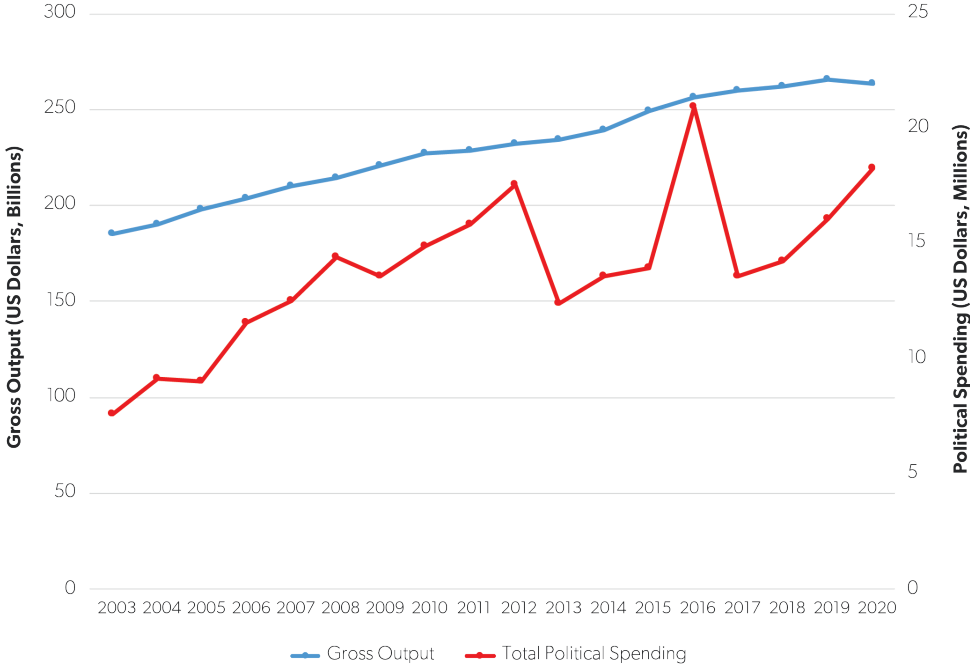
Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

because of changes in industry output and campaign contributions and lobbying expenditures. However, as shown in Figure 7, while the value of output in the NRCF sector increased almost every year between 2003 and 2020, in contrast to the farm sector (where the value of output is considerably more volatile), year-to-year changes were modest. However, for the NRCF sector, political influence spending was relatively volatile. Therefore, political influence spending largely explains year-to-year change in the industry's political influence index.

As shown in Figure 8, most of the volatility in political influence spending by the NRCF industry derives from year-to-year changes in campaign contributions that, as for the farm and other industries, increased substantially in most presidential election years (2004, 2008, 2012, and 2016) but perhaps surprisingly not in 2020. However, between 2008 and 2011, NRCF lobbying expenditures increased substantially. This was when Congress and the Obama administration were engaged with health care policy and the debate over the 2010 Affordable Care Act and subsequently the implementation of the act's provisions. After 2011, NRCF lobbying expenditures declined sharply and thereafter remained relatively stable until 2020, when the NRCF industry again increased its outlays on lobbying efforts, perhaps because of a surge in COVID-19-related legislative initiatives.

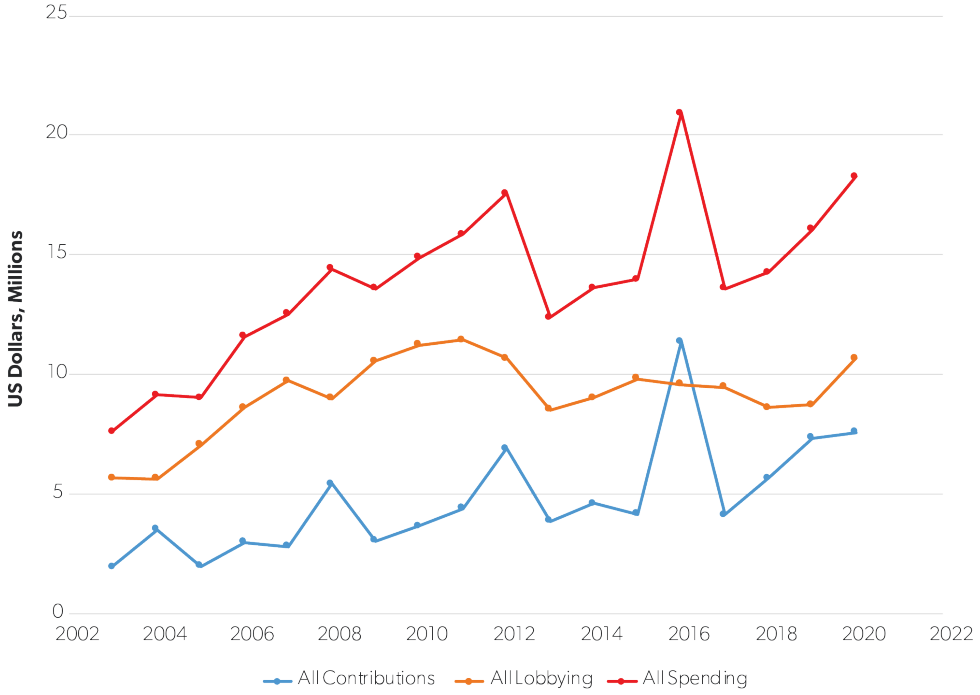
Table 1 presents further evidence on the extent to which industries differ with the resources they allocate to lobbying and campaign contributions. For each of the 60 different sectors, Table 1 reports the value of each industry's political index averaged over the most recent four-year election cycle (2017–20).[18] Index values include 0.05 for the warehousing and storage sector; 0.06 for the rental and leasing services and lessors of intangible assets sector; 3.97 for the securities, commodity contracts, and investments sector; and 3.99 for the amusements, gambling, and recreation industries sector. Thus, adjusting for differences in industry output, over the four-year period, the amusements, gambling, and recreation industries spent an annual average of $551.93 per million dollars of output on political influence, about 7,500 percent

Figure 7. NRCF Gross Output (US Dollars, Billions) and Political Spending (US Dollars, Millions): 2003–20



Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Figure 8. NRCF Federal Political Spending (US Dollars, Millions): 2003–20



Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

more than the average annual amount of $7.31 spent by the warehousing and storage sector and 397 percent more than the average amount spent by all 60 sectors.[19]

Discussion and Conclusion

The two industry-specific case studies are informative. First, they demonstrate that, adjusting for industry size, the resources allocated to efforts to exert political influence vary substantially from one industry to the next.

Second, the two case studies strongly suggest that political influence efforts at the federal level increase substantially in presidential election years and to a lesser degree in off years when only congressional elections are held. Further, the case studies indicate that most of these spikes in political influence efforts are caused by increases in campaign contributions rather than lobbying expenditures. Neither finding is surprising. Federal election campaign contributions are generally perceived to be made in years in which elections are held, although in other years such contributions are often sought for war chest purposes by the major political parties and candidates engaged in primary campaigns.

Third, some evidence shows that political influence efforts increase when Congress and the administration are considering policy changes that affect a specific sector. For example, farm-level efforts increased substantially in 2018, a farm bill year, and NRCF lobbying efforts increased substantially from 2009 to 2011 when the Affordable Care Act was being debated and the rules and regulations determining its implementation were being developed.

Finally, annual political influence indexes have been estimated using the methodology described in this report during 2003–20 for all 60 sectors, for which summary findings for the most recent election cycle (2017–20) are reported in Table 1. A more detailed analysis of all these indexes will likely provide interesting insights about the extent and timing of industry-specific efforts to engage with and influence policy outcomes.

Table 1. Industries Ranked by Average Political Influence Index Value (2017–20)

Rank	Industry	Political Influence Index	Ratio of Political Spending (US Dollars) to Gross Output (US Dollars, Millions)	Average Political Spending: 2017–20 (US Dollars, Millions)	Average Gross Output: 2017–20 (US Dollars, Billions)
1	Amusements, Gambling, and Recreation	3.99	551.93	85.00	154.01
2	Securities, Commodity Contracts, and Investments	3.97	549.29	369.19	672.12
3	Water Transportation	3.94	545.75	26.99	49.46
4	Apparel and Leather and Allied Products	3.68	508.83	10.13	19.91
5	Educational Services	3.19	440.89	166.97	378.72
6	Pipeline Transportation	2.98	412.23	22.52	54.64
7	Miscellaneous Manufacturing	2.93	404.87	72.09	178.05
8	Forestry, Fishing, and Related Activities	2.59	357.82	19.85	55.48
9	Utilities	2.57	355.39	180.86	508.89
10	Rail Transportation	2.52	348.51	28.65	82.20
11	Computer and Electronic Products	2.41	334.17	130.47	390.45
12	Chemical Products	2.23	308.93	268.93	870.51
13	Farms	2.21	305.28	124.71	408.51
14	Oil and Gas Extraction	2.11	292.10	99.28	339.87
15	Motion Picture and Sound Recording	1.98	273.48	42.10	153.94
16	Ambulatory Health Care Services	1.88	260.01	291.43	1,120.86
17	Mining, Except Oil and Gas	1.81	250.11	27.38	109.48
18	Broadcasting and Telecommunications	1.72	238.43	215.96	905.77
19	Data Processing, Internet Publishing, and Other Information Services	1.72	238.05	108.60	456.20
20	Support Activities for Mining	1.72	237.64	20.32	85.53
21	Air Transportation	1.51	209.15	43.80	209.44
22	Other Transportation Support Activities	1.47	203.80	53.47	262.35
23	Paper Products	1.24	171.53	32.81	191.27
24	Professional, Scientific, and Technical Services	1.20	166.10	397.08	2,390.59
25	Federal Reserve Banks, Credit, and Related Activities	1.20	166.00	170.69	1,028.25
26	Insurance Carriers and Related Activities	1.18	162.83	207.25	1,272.83
27	Nonmetallic Mineral Products	1.07	147.40	20.26	137.46

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Table 1. Industries Ranked by Average Political Influence Index Value (2017–20) (*continued*)

Rank	Industry	Political Influence Index	Ratio of Political Spending (US Dollars) to Gross Output (US Dollars, Millions)	Average Political Spending: 2017–20 (US Dollars, Millions)	Average Gross Output: 2017–20 (US Dollars, Billions)
28	Performing Arts, Sports, Museums, and Related Activities	1.01	139.33	25.36	181.99
29	Machinery	0.93	128.52	52.44	408.01
30	Hospitals	0.92	127.45	123.92	972.33
31	Transit and Ground Passenger Transportation	0.83	115.44	10.76	93.18
32	Accommodation	0.68	94.38	24.90	263.79
33	Food and Beverage and Tobacco Products	0.66	91.47	89.99	983.73
34	General Merchandise Stores	0.64	89.22	22.26	249.51
35	Motor Vehicle and Parts Dealers	0.64	88.94	29.92	336.37
36	Publishing Industries, Except Internet (Includes Software)	0.63	87.54	34.15	390.13
37	Waste Management and Remediation Services	0.60	83.21	9.19	110.46
38	Petroleum and Coal Products	0.54	74.90	41.63	555.77
39	Other Retail	0.54	74.83	82.39	1,100.99
40	Real Estate	0.52	71.52	266.10	3,720.89
41	Primary Metals	0.51	71.19	17.17	241.20
42	All Transportation Equipment	0.51	71.07	77.95	1,096.72
43	Fabricated Metal Products	0.46	63.27	23.81	376.37
44	Food and Beverage Stores	0.45	62.71	16.34	260.55
45	Electrical Equipment, Appliances, and Components	0.44	60.54	8.08	133.39
46	Construction	0.43	59.79	101.75	1,701.71
47	Nursing and Residential Care Facilities	0.43	59.20	15.55	262.62
48	Textile Mills and Textile Product Mills	0.40	55.41	2.76	49.85
49	Truck Transportation	0.37	50.73	19.22	378.87
50	Plastics and Rubber Products	0.36	49.42	12.22	247.24
51	Social Assistance	0.35	48.75	11.15	228.66
52	Furniture and Related Products	0.23	31.84	2.57	80.63
53	Food Services and Drinking Places	0.22	30.66	26.09	851.02
54	Management of Companies and Enterprises	0.22	29.91	19.63	656.21
55	Wood Products	0.18	25.53	3.08	120.67

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Table 1. Industries Ranked by Average Political Influence Index Value (2017–20) (*continued*)

Rank	Industry	Political Influence Index	Ratio of Political Spending (US Dollars) to Gross Output (US Dollars, Millions)	Average Political Spending: 2017–20 (US Dollars, Millions)	Average Gross Output: 2017–20 (US Dollars, Billions)
56	Printing and Related Support Activities	0.14	19.95	1.79	89.59
57	Wholesale Trade	0.12	16.70	34.43	2,062.34
58	Administrative and Support Services	0.09	12.44	12.71	1,021.93
59	Rental and Leasing Services and Lessors of Intangible Assets	0.06	7.66	2.82	367.88
60	Warehousing and Storage	0.05	7.31	1.05	143.79
	All Industries	**1.00**	**138.40**	**4,459.96**	**32,225.18**

Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

Appendix A. Industry Matching Example

The data sources used in calculating the political influence indexes are based on different coding systems. However, at the two- or three-digit North American Industry Classification System (NAICS) industry level, it is possible to match the data reported by OpenSecrets on lobbying and campaign contributions with the data on industry output reported by the Bureau of Economic Analysis (BEA) using codes based on the Standard Industrial Classification (SIC) system with considerable precision using mapping or "crosswalk" programs. These programs are developed using the guides and codebooks provided by each data source.

The first mapping program (BEA_CROSSWALK.xlsx) matches the industry codes OpenSecrets uses to the industry codes the BEA uses. OpenSecrets provides industry "Catcodes." These codes are based on the SIC system, the precursor to the NAICS. The BEA organizes industries into five levels, A through E (different levels of aggregation, with A being the most aggregated and E the most disaggregated level of industry definitions). The BEA assigns a code to each of the 100 sectors or subsectors, the definitions of which are based on the NAICS system. The program matches industries from the OpenSecrets code guide[20] to BEA industries[21] by name, using the NAICS[22] codebook as a guide. The program code reads in raw data in the form of text files from OpenSecrets, assigns each campaign contribution and lobbying expenditure associated with the OpenSecrets industry code to the corresponding BEA industry code, and aggregates contributions by industry code.

Contributions and lobbying expenditures by unions are allocated to each BEA industry as follows. Data on union membership are collected by the US Census Bureau and reported in the BEA's Union Membership and Coverage Database using US Census industry codes. The second mapping program matches the Census Bureau codes to the requisite NAICS codes, and a third mapping program matches those NAICS numbers to BEA codes. Union expenditures on lobbying and campaign contributions are then allocated to each BEA industry based on the share of total union membership working in that sector.

The final mapping program is used to clean and sort data for those sectors in the NAICS code industries that match at different levels of aggregation in the BEA code system. The following example for manufacturing of transportation equipment illustrates how this is accomplished.

In the NAICS, manufacturing is a two-digit sector, with 21 three-digit subsectors. In the BEA code, manufacturing is a B-level industry, separated into two C-level industries and 19 D-level industries. The BEA C-level manufacturing industries are durable goods and nondurable goods, which do not match to NAICS codes at any level of aggregation. However, this is not an issue, as the focus here is on NAICS three-digit industries, which mostly match with manufacturing industry subcategories at the BEA D level.

The majority of the D-level BEA and three-digit NAICS industries match directly. For example, BEA industry 14 (wood products) matches with NAICS subsector 321 (wood product manufacturing). In a few cases, either the NAICS or BEA codes provide more detail for an industry at similar levels of disaggregation. For example, NAICS industry 313 (textile mills) and 314 (textile product mills) correspond to BEA industry 28 (textile mills and textile product mills). A third crosswalk program is used to map contributions and lobbying from these two NAICS industries to one BEA industry, and in the final index, this industry is presented as textile mills and textile product mills, matching the BEA industry code name.

The opposite holds in one case. BEA industries 21 (motor vehicles, bodies and trailers, and parts) and 22 (other transportation equipment) correspond to NAICS subsector 336 (transportation equipment manufacturing). A separate mapping program therefore combines output measures for the two BEA industries to match the NAICS category, and the combined sectors are described in this report as motor vehicles, bodies and trailers, parts, and other transportation equipment. BEA industries are generally less disaggregated than NAICS industries are. Thus, for all but one sector, political influence index values and other variables are presented at the most

detailed BEA level available. The exception, as discussed, involves transportation equipment manufacturing for which the two BEA D-level industries are aggregated to match the corresponding three-digit NAICS industry.

Finally, two sectors have been excluded from this report. The first is the BEA category "other services, except government." This broad category includes unions and business organizations with PACs whose political spending has already been allocated to sectors that those organizations represent. We also omit the BEA sector "government," which includes activities at all levels of government, whether local, state, or federal. Government-sector organizations have many avenues through which they exert influence over public policy beyond expenditures on lobbying and campaign contributions.

Appendix B. Evidence on How Industry Size Affects Campaign and Lobbying Expenditures

This appendix presents the results of a statistical analysis of the relationship between industry size, measured by gross output as reported by the Bureau of Economic Analysis, and efforts by an industry to exert political influence as measured by the industry's political influence index. The dataset consists of 1,080 observations (for each of the 60 sectors over the 18-year period from 2003 to 2020) on the dependent variable, the industry-specific value of the political influence index, and the explanatory variable, which is the value of industry gross output (in 2020 dollars).

The model for which results are reported in Table B1 is a linear regression of the political index variable for each industry on the industry's gross value of output estimate using ordinary least squares procedures in R. Fixed effects for each year are also included because, as discussed for each of the two case study industries (the farm and nursing and residential facilities sectors), expenditures on campaign contributions tend to spike in election years, suggesting that year effects might be important.

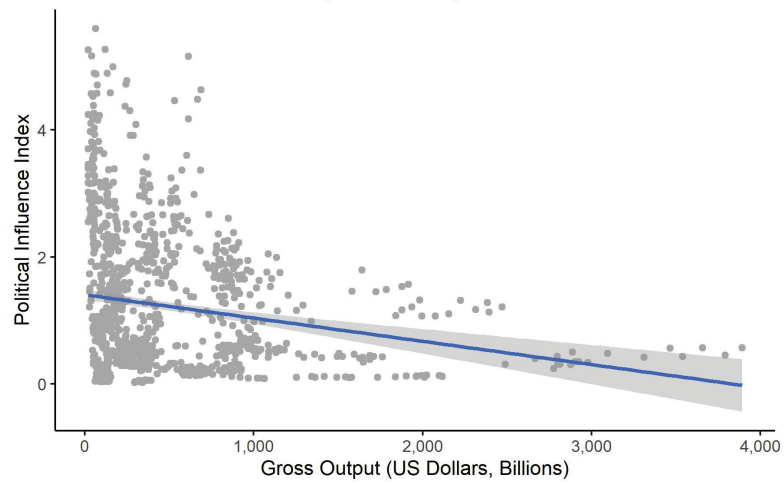
Table B1. Regression of Political Influence Index by Gross Output

Variable	Parameter Estimate	Standard Error
(Intercept)	1.40444	0.043885
Gross Output (US Dollars, Billions)	–0.00037	6.08E-05
Number of Observations	1,080	
R^2	0.0325	
Adjusted R^2	0.0316	

Source: Authors.

These results suggest that increases in industry size have statistically significant but small negative impacts on an industry's political influence index. For example, a $100 billion increase in industry output reduces the value of an industry's political index by 0.037. Given that average annual industry output among the 60 sectors was $134 billion from 2017 to 2020, a $100 billion increase is substantial, representing a 73 percent increase. Thus, for an industry whose index value is one (the weighted average political index value across all 60 sectors), a substantial increase in industry size results in a modest decrease in the industry's political influence index of 3.7 percent.

Figure B1. Political Influence Index by Gross Output: 2003–20



Note: All dollar values are indexed to January 1, 2020, dollars using the Federal Reserve Personal Consumption Expenditures Price Index.
Source: Authors' calculations using data obtained from OpenSecrets, the Bureau of Economic Analysis, and the Union Membership and Coverage Database.

These findings suggest that while a link between political influence efforts (relative to industry size) and the size of the industry itself exists, that link is modest. Figure B1 shows the value of an industry's political index (measured on the vertical axis) relative to the indus-

try's size (measured on the horizontal axis). The straight line shows the estimated relationship between the two variables using the parameter estimates reported in Table B1. Figure B1 also shows a relationship between the political index variable and industry size but suggests that much of that observed relationship is driven by a few observations on the largest industries. For example, the 18 observations associated with the largest values of gross output are all annual observations for the same industry (the real estate sector).

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Notes

1. Yuen Yuen Ang, "Unbundling Corruption: Revisiting Six Questions on Corruption," *Global Perspectives* 1, no. 1 (2020), https://doi.org/10.1525/gp.2020.12036.
2. Information is available for earlier years, but here only data from 2003 forward are used, as this was the first year that strict enforcement of reporting requirements for all forms of soft money went into effect.
3. Samuel E. Finer, *Anonymous Empire: A Study of the Lobby in Great Britain* (London: Pall Mall Press, 1958).
4. Conversely, such groups may encourage their members to contribute to a legislator's campaign.
5. In some cases, an industry may have effectively captured a government agency. One case in point is the Department of Transportation Marine Administration, whose explicit mission is to serve the interest of the US shipping industry, partly because it is argued that the industry serves the needs of the military. See Stephanie Mercier and Vincent H. Smith, "Cargo Preference and U.S. International Food Aid Programs," *Applied Economic Perspectives and Policy* 42 (2019): 759–76.
6. Such observations on campaign contributions have contribution dates that either precede or come after that period. These apparently mismatched contributions may involve simple errors in recording the reporting date, be allocated to the correct year but reported after that year's end, represent refunds to the donor, or be corrections of previous errors. However, as noted in the text, from 2003 to 2020, these donations account for only 0.15 percent of all campaign contributions. In two years, 2006 and 2014, apparently mismatched contributions were more extensive, respectively accounting for 0.38 percent and 0.55 percent of all contributions in those years. The mismatched observations change only the estimated total value of campaign contributions given to a specific industry in a specific year (e.g., the hospital sector in 2015) by more than 1 percent in 33 of 1,080 annual observations (for 60 sectors in each of 18 years). Only in three cases did the mismatched contributions shift estimated total contributions allocated to a sector in a specific year by more than 5 percent, with the outlier case being an increase of 8 percent (for food and beverage stores in 2014).
7. OpenSecrets categorizes businesses into 13 sectors and 100 industries as described in its methodology paper. See OpenSecrets, "Follow the Money: A Handbook," https://www.opensecrets.org/resources/ftm/ch12p1.php.
8. The North American Industry Classification System (NAICS) was introduced in 1997 to harmonize US reporting practices with those used in Canada and Mexico subsequent to the implementation of the North American Free Trade Agreement in 1994.
9. A detailed description of the Bureau of Economic Analysis' (BEA) classification system is available at Bureau of Economic Analysis, "Industries," https://www.bea.gov/resources/learning-center/what-to-know-industries.
10. A more detailed description of how this is accomplished is presented in Appendix A.
11. The Union Membership and Coverage Database from which membership numbers by industry are obtained uses US Census Bureau industry codes to identify the numbers of union members employed in that industry (regardless of the union to which they belong). These codes are first matched to their corresponding NAICS industry codes and then further matched to the BEA industry codes to allocate union expenditures on campaign contributions and lobbying efforts based on the share of members working in each industry.
12. See the description of the rules for reporting lobbying expenditures at OpenSecrets, "Methodology," https://www.opensecrets.org/federal-lobbying/methodology.
13. This approach allows for comparisons of spending and output levels over time in real terms, as in Figures 3, 4, 7, and 8.
14. It is easy to show that, given the way we compute economy-wide spending on campaign contributions and lobbying activities per million dollars of output, the total level of spending is equal to the sum of spending by each sector weighted by the sector's share of the value of total output produced by all 60 sectors.
15. The nursing and residential care facilities sector is one of three health care sectors for which index values are reported. The other two are the hospitals and ambulatory care sectors.

16. Regressions of political influence index values on industry size provide some evidence of economies of scale (higher index values for smaller industries), but the effects are small, and plots of observed values against predicted values indicate wide dispersions of index values for any given level of industry size. Findings are presented in Appendix B. Note also that other determinants of sector-wide spending on political influence efforts are important, especially the extent to which industry interest groups expect to benefit from those efforts.

17. The 2014 Farm Bill included major changes to agricultural policy, including the termination of an annual $5 billion Direct Payment Program and the introduction of new price and revenue-based subsidy programs. Vincent H. Smith et al., "Agricultural Policy in Disarray: An Overview," in *Agricultural Policy in Disarray*, ed. Vincent H. Smith, Joseph W. Glauber, and Barry K. Goodwin (Washington, DC: AEI Press, 2018), 1:17–51.

18. The industry-specific average index values reported in Table 1 for 2017–20 are computed as follows. The sum of annual total campaign contributions and lobbying expenditures over the four-year period is divided by the sum of the value of industry gross output over that period.

19. The standard deviation of the political influence index variable across the 60 industries is 1.22. Correspondingly, the standard deviation of political influence expenditures per million dollars of output is $153.16, compared to average expenditures of $116.34 among all 60 sectors.

20. OpenSecrets, "CRP Categories," https://www.opensecrets.org/downloads/crp/CRP_Categories.txt.

21. Bureau of Economic Analysis, "Gross Output by Industry," September 30, 2021, https://www.bea.gov/data/industries/gross-output-by-industry.

22. Executive Office of the President, Office of Management and Budget, "North American Industry Classification System," 2017, https://www.census.gov/naics/reference_files_tools/2017_NAICS_Manual.pdf.