On the measurement of rent seeking and its social opportunity cost [*]

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Abstract. Utilizing 4-digit industry data by county, we compare the allocation of resources across industries in state capital areas with noncapital areas. We are able to identify which industries are expanded and contracted relative to noncapital areas. Our results provide the first direct evidence and measurement of the forgone productive activity resulting from resources being reallocated toward rent seeking and interest group activity. Our data also allow us to measure total rent seeking, and also to isolate the extent of indirect and in-kind rent seeking, which can account for part of the Tullock paradox.

1. Introduction

Substantial resources are devoted toward altering government policy in the form of rent seeking in the United States. Because rent-seeking activity is geographically concentrated in capital areas, we explore the extent of rent seeking, and the distortions of economic activity it causes, by comparing the industrial structure in state capitals with other noncapital areas.[1] We do so using data on the number of establishments at the 4-digit SIC level for each U.S. county from the U.S. Census Bureau's *1995 County Business Patterns* data series. With this data we can identify the extent to which each industry is expanded or contracted relative to similar noncapital areas. Because of the broad scope of this data, we are able to address several important and significant issues with respect to rent-seeking activity, which are briefly outlined below.

1.1. *The measurement of indirect and in-kind rent seeking expenditure: The Tullock paradox*

Beginning with the seminal rent seeking paper by Gordon Tullock (1967), and continuing with the contributions of Krueger (1974) and Posner (1975), it is now widely accepted that social cost of government activity such as regulation, taxation, or subsidies is not limited to the standard "Harberger triangle" that measures the standard welfare changes.[2] Indeed the total cost is this area plus the value of any rent-seeking resources devoted toward influencing the political process to accept, reject, or reallocate the benefits and costs of the government activity.[3] At first pass, an optimizing agent would be willing to expend resources up to the total value of the transfer, giving rise to measuring this added cost by the "Tullock rectangle" that corresponds to the transfer. Ongoing debate continues as to whether actual rent seeking expenditures are smaller, equal to, or even greater than the area of the Tullock rectangle.[4] In the terminology of this literature, the issue is whether rents are under dissipated, fully dissipated, or over dissipated.

After several decades of empirical exploration into this phenomenon it has generally been concluded, even by Tullock himself, that the total observed rent-seeking expenditure is vastly smaller than would be predicted in theory.[5] One avenue in explaining this "Tullock paradox" has been provided by Mixon, Laband, and Ekelund (1994). They propose "that much rent seeking, perhaps to a large degree, is in-kind and hidden from low-cost scrutiny."[6] In their paper, Mixon, Laband, and Ekelund (1994) test their hypothesis by surveying the phone books of each state capital city and one paired city from the same state. They count the number of sit-down restaurants and the number of public golf courses in both the capital city phone book, and the phone book of the paired city from the same state. They find that both are significantly higher in the capital cities, providing some evidence that these types of in-kind rent seeking expenditures are present.

If a large portion of rent seeking is done through these interest groups providing legislators with, for example, free trips or vacations, free meals, free recreational activities such as golf, and other in-kind benefits, it is clear that this could account for some of the discrepancy between traditionally measured rent seeking and what is predicted in theory. This explanation also has a theoretical basis, as in-kind rent seeking is less visible to constituents and is much harder to measure. Thus, in-kind rent seeking may be less politically costly for a politician to accept than direct monetary payments.

Both direct cash payments (such as campaign contributions) and in-kind gifts form the core of what we term *direct* rent-seeking expenditures. These expenditures are made by groups and individuals and are directed or targeted at specific legislators or politicians for the purpose of altering public policy

decisions. A second important category we introduce in this paper is what we term *indirect* rent-seeking expenditures. Interest groups also attempt to alter the outcomes of the political process by holding demonstrations, purchasing billboard, radio, or television advertising, or by funding, publishing, and circulating policy-oriented journals and research (the type of activity usually done by public-policy institutes). These expenditures are intended to influence political outcomes by providing specific information on the likely effects of policies and communicating the likely political consequences (on voter support for reelection, for example) to the political decision makers. We term them indirect rent seeking expenditures because they are not directly targeted at a specific legislator. Interestingly, indirect rent-seeking expenditures have received little attention in previous literature. However, indirect rent-seeking may be a very important component (in fact perhaps a much larger component than in-kind expenditures) of the "missing" expenditures that account for the Tullock paradox.

In this paper we test for the presence and extent of this *indirect* rent-seeking activity. In addition, we also perform the same analysis for selected industries which capture the *in-kind* rent seeking activity of Mixon, Laband, and Ekelund (1994), as well as industries which capture the more *traditional* direct rent seeking activity for comparison. Our results are supportive of the idea that indirect rent seeking is a large and important component of rent seeking activity. Perhaps even more important, our technique allows us to derive a rough estimate of total rent seeking distortions in U.S. capital cities. While our estimate contains some biases in both directions, the great variation across previous papers in estimated rent seeking makes our additional rough estimate more valuable.

1.2. *The measurement of the social cost of rent seeking activity*

Rent seeking is a socially wasteful activity because it reallocates resources away from productive, positive-sum, activities into unproductive, zero-sum activities. Thus, the real social cost of rent seeking is the opportunity cost of these resources in terms of forgone private sector production. Theory tells us that this redistribution of resources creates a net social loss because the value to society of the forgone productive activities exceeds the value of the rent-seeking activities undertaken. While the presence of these losses might be tautological, they are very hard to observe and notice in reality, in a manner similar to the economic losses on export industries from imposing trade restrictions on imported goods. Such unseen and diffuse losses generally escape specific notice. In our data, expansions in some industrial categories clearly correspond to reductions in other industrial areas. The reductions we find demonstrate the existence of forgone productive activities.

It is worth noting, however, that following Congleton (1988), the deadweight loss from rent seeking is not equivalent to total rent seeking expenditures (which we measure). For example, if a lobbyist purchased a dinner for a legislator for $100, while the whole $100 would be considered rent seeking, to find the deadweight loss, one would need to net out the subjective value of the dinner to the legislator. Thus, if the value (to the legislator) of the meal provided was $70, then the deadweight loss would only be the difference, or $30.

1.3. *The measurement of state-level interest group activity*

Measuring interest group activity at the federal level is a relatively simple process given the ease at which data on explicit campaign contributions to the members of Congress and data on the total number of PACs and registered lobbyists can be obtained. At the state level, however, no such data are available due to differences in reporting methods and requirements across states. Even for the few states for which this data are available, the data generally is only recent because of recent adoption of such reporting rules. These difficulties present problems in attempting to measure, for example, the role played by interest groups in the most rapid period of state government expenditure growth during the 1960s. Unlike earlier works, we can identify several industries that capture interest group activity in state capitals. Because it would be possible for future researchers to construct a time-series and cross-sectional panel of the activity in these industries, our results open the door for future empirical research on state-level interest group activity.

We proceed by first describing our data and its limitations. Next, we then test for the presence and extent of direct, in kind, and indirect rent-seeking activity. Finally, we conclude the analysis by exploring the redistribution of resources across all industries and demonstrating the net social opportunity costs of rent seeking activity.

2. The data and general approach

The U.S. Census Bureau's *1995 County Business Patterns* provides data on the number of establishments in each of 1,135 SIC-coded industries for every county in the United States. There are a total of 3,141 counties, of which 51 are capital counties (the fifty state capitals plus Washington D.C.). The SIC codes afford several levels of aggregation across the industries, corresponding to 1-digit, 2-digit, 3-digit, and 4-digit levels. The number of establishments in the 1-digit SIC code for Manufacturing (2–), for example, would consist of the total number in all 2-digit subdivisions of this code (2000 food products,

2100 tobacco products, 2200 textiles, etc.). Going further, each of these is subdivided further to 3-digit industries (2000 food products contains 2010 meat products, 2020 dairy products, etc.), which in some, but not all, cases are further divided into 4-digit industries (2020 dairy contains 2021 creamery butter, 2022 cheese, 2023 evaporated products, 2024 ice cream, etc.). Because some 3-digit industries are not subdivided, we construct a new category "final-digit SIC" which is the finest subdivision available. This category allows us to avoid double counting which would occur if both 3 and 4-digit were included for all industries, and also to avoid missing some industries which would occur if we only used 4-digit data. In total, there are 1,135 SIC-coded industries, of which 879 are final-digit industries.

We begin by selecting 33 industries on an *a priori* basis which we believed captured rent seeking activity. Industries are selected which represent traditional rent seeking, as well as in-kind rent seeking, and indirect rent seeking. We then compare the size of these industries in capital counties with noncapital counties, and test for statistical differences. We use two comparison groups, one being the whole sample of noncapital counties, the other being a carefully selected group of 50 similar matched pair counties like in Mixon, Laband, and Ekelund (1994).[7] These counties are given in the table in the Appendix. In a later section of this paper we will perform this analysis for each and every industry in the sample in order to gain insights into additional industries (beyond our 33 a priori selected ones) which may reflect rent seeking activity. In addition, this industry analysis provides an interesting framework within which to explore the reallocation of resources across industries in capital areas.

At the outset we wish to discuss some caveats and potential biases in our analysis. First, there is a drawback of establishment count data. While this is identical to the approach taken in Mixon, Laband, and Ekelund (1994), it has some limits. In particular, the gains and losses cannot simply be added to arrive at any conclusion about the net social effects of the reallocation (as it could if we had a measure of the dollar value of output by industry).[8] For our 33 selected industries we gather average firm data on employees, payroll, and revenues at the U.S. level from which to estimate the value of the traditional, in kind, and indirect rent seeking we find. However, for our analysis using all industries, we are unable to feasibly perform this matching. For this broader analysis, however, we do measure these expansions and contractions in several different ways and always attempt to provide a sum of the gains and losses on these measures. If these net effects are consistently negative, this is strong evidence consistent with, but not proof of, these net social losses existing in an economic sense.

Second, our results likely provide an upper bound for the amount of rent-seeking, as they capture all effects of the political institution's location, not just those associated with rent seeking. For example, we would expect that the administration functions of government would require additional private sector resources in areas such as printing and perhaps travel related industries associated with the coming and going of legislators and their staff. Additionally, temporary housing and services such as dry-cleaning might also increase due to the nature of the altered consumer group in these cities. Due to our choice to do a broad analysis, rather than picking only one or two industries, we cannot hope to appropriately capture all relevant variables for each and every industry, nor each and every county. This forces us to use more general techniques in analyzing the data. To combat these problems we provide results using several different measures, some of which are less susceptible to one of these problems, but maybe more susceptible to others. It is also worth noting that because we explore only rent seeking in capital areas, that our total will also contain a bias in the other direction as some rent seeking surely exists outside these counties as well. Thus, our data has inherent limitations, some of which tend to bias the results upward, while some tend to bias the results downward.

We construct several different measures of the industrial size difference between capitals and noncapitals. First, for each industry, we compute the ratio of the number of per capita establishments in the median capital county to the average number of per capita establishments across all noncapital areas. We then also compute this measure of the median per capita establishments in capitals relative to the median of the carefully selected 50 comparison noncapital counties. This measure has the advantage of capturing the magnitude of the expansion or contraction in the industry relative to noncapital areas.[9] We can find, for example, that the median capital has three times as many establishments per capita in an industry as the average noncapital area. The disadvantage of this measure is there is no way to test for whether the difference is statistically significant. Our second measure is to calculate, for each industry, what percent of the capital counties have more per capita establishments in that industry than the average across all noncapital areas. This measure has the advantage of capturing which industries are generally expanded or contracted individually in almost every capital relative to noncapital areas. This measure also lends itself to hypothesis testing for statistically significant differences between capitals and noncapitals. The disadvantage is that it does not measure the degree of expansion in the industry, only whether it tends to be larger or smaller in almost every capital. We also compute this ratio using the percent of capitals greater than the median of the matched pair noncapital counties. The final measure we employ is to calculate what percent

of all U.S. establishments in the industry are located within capital counties. This picks up on the industries which tend to be heavily concentrated only around legislative centers. This measure affords both a picture of the degree of expansion, and the extent to which it is a general phenomenon across all capitals. This measure also lends itself to hypothesis testing.

As a concrete example of our measures, there are 344,854 eating establishments in the United States, 32,634 of which are in capital counties and 312,220 of which are in noncapital counties. On a per capita basis, in noncapital counties there are 0.001292 eating establishments per capita, or more conveniently stated, 129.2 per 100,000 population in the noncapital areas. For comparison, across all capital counties there are 154.0 eating establishments per 100,000 population, with the median capital having 153.5. Our first measure, the ratio of the median capital to the average for all noncapital areas, is thus 153.5 / 129.2 = 1.188. We also use our carefully selected 50 matched counties to find a second measure; here there are 134.4 per capita establishments, so the ratio is 153.5 / 134.4 = 1.142. As would be expected, since the matched pair counties tend to be more urban than the average noncapital area (just like the capitals tend to be also) the statistic tends to reflect this difference.

Our second measure is the percent of capitals with a per capita value greater than the noncapital average. First, we obtain the per capita value for each capital county separately, and find that 47 capital counties, or 92.16%, individually have more per capita eating establishments than the noncapital average. Had capitals and noncapitals have been similar, this percentage should have been approximately 50% (half above/half below). We can reject this hypothesis at the 1% level, suggesting that capitals have significantly more eating establishments per capita than noncapital areas.[10] Similarly, when compared to the matched pair counties, 84.31% of capitals individually have more per capita eating places than the median of the matched pair noncapital counties. This statistic is also statistically significant.

Finally, our third measure is the percentage of all U.S. eating establishments in capitals, which is 9.46% (32,634 out of 344,854). On average, 9.20% of all U.S. establishments are in capitals. Again using the binomial test statistics, we find that the 9.46% is significantly higher than would be expected if the distribution were similar across capitals and noncapitals at better than a 1% level of significance. Thus, both of our measures confirm the Mixon, Laband, and Ekelund (1994) finding that there are significantly more eating establishments in capitals.

Table 1a. Economic activity in rent seeking industries: Capital versus noncapital counties.

SIC #	Industry (- subdivision)	Per Capita Establishments			Percent of all U.S. Establishments in Capitals (test statistic)	
		Ratio of Median Capital to Non-capital Average	Percent of Capitals Greater than Noncapital Average (test statistic)			
Traditional, Direct Rent Seeking Industries						
6730 - Trusts		1.748	78.43%	(4.06)***	14.83%	(14.04)***
6732 - Educational, religious, etc. trusts		1.814	68.63%	(2.66)***	16.03%	(11.76)***
6733 - Trusts, n.e.c.		1.410	64.71%	(2.10)**	14.01%	(8.64)***
8100 - Legal services		1.444	86.27%	(5.18)***	12.13%	(41.01)***
8600 - Membership organizations		1.489	84.31%	(4.90)***	9.73%	(9.14)***
8610 - Business associations		3.092	94.12%	(6.30)***	20.16%	(45.90)***
8620 - Professional organizations		4.061	94.12%	(6.30)***	25.48%	(43.17)***
8630 - Labor organizations		1.624	76.47%	(3.78)***	11.43%	(10.59)***
8640 - Civic and social associations		1.455	88.24%	(5.46)***	10.10%	(6.39)***
8650 - Political organizations		5.020	88.24%	(5.46)***	28.94%	(29.75)***
8660 - Religious organizations		0.999	49.02%	(-0.14)	7.23%	(-26.37)***
8690 - Membership organizations, n.e.c.		1.835	92.16%	(6.02)***	13.94%	(17.02)***
8740 - Management and public relations		1.394	80.39%	(4.34)***	13.53%	(45.05)***
8742 - Management consulting services		1.175	66.67%	(2.38)***	13.30%	(28.82)***
8743 - Public relations services		2.297	80.39%	(4.34)***	20.70%	(29.59)***
8748 - Business consulting, n.e.c.		1.392	78.43%	(4.06)***	13.80%	(21.83)***
In-kind, Direct Rent Seeking Industries						
5812 - Eating places		1.188	92.16%	(6.02)***	9.46%	(5.38)***
7299 - Miscellaneous personal services,		1.209	72.55%	(3.22)***	10.39%	(5.51)***
7992 - Public golf courses		0.746	33.33%	(-2.38)**	6.60%	(-5.81)***
7997 - Membership sports and rec. clubs		0.960	39.22%	(-1.54)*	7.34%	(-7.74)***
Indirect Rent Seeking Industries						
2700 - Printing and publishing		1.278	70.59%	(2.94)***	10.73%	(13.49)***
2710 - Newspapers		1.000	49.02%	(-0.14)	7.08%	(-6.76)***
2720 - Periodicals		1.294	68.63%	(2.66)***	13.38%	(10.26)***
2740 - Miscellaneous publishing		1.248	56.86%	(0.98)	12.60%	(7.23)***
3993 - Signs and advertising specialities		1.423	64.71%	(2.10)**	11.36%	(5.23)***
4830 - Radio and television broadcasting		1.354	74.51%	(3.50)***	9.83%	(2.04)**
7310 - Advertising		1.296	72.55%	(3.22)***	12.71%	(17.44)***
7311 - Advertising agencies		1.487	72.55%	(3.22)***	13.45%	(17.20)***
7312 - Outdoor advertising services		1.097	52.94%	(0.42)	11.16%	(2.41)***
7313 - Radio, TV, publisher reps.		0.816	43.14%	(-0.98)	10.96%	(2.62)***
7319 - Advertising, n.e.c.		0.756	39.22%	(-1.54)*	11.62%	(3.93)***
7331 - Direct mail advertising services		1.493	68.63%	(2.66)***	11.93%	(6.07)***
8733 - Noncommercial research orgs.		1.675	80.39%	(4.34)***	20.55%	(22.04)***

Note. *** indicates statistical significance at the 1% level, ** at 5%, and * at 10%. Critical values from binomial probability distribution.

3. Traditional, in kind, and indirect rent seeking in state capitals

Using the listing of the 1,135 SIC-coded industries, we selected 33 industries on an *a priori* basis which we believed captured rent seeking activity. They are listed in Tables 1a and 1b, and are classified as to whether we believed they captured traditional, in kind, or indirect rent seeking activity. Table 1a shows our statistics that compare the capital areas to the average across all noncapital areas, while Table 1b shows these same statistics computed against the matched pair noncapital counties.

Table 1b. Economic activity in rent seeking industries: Capital versus comparison counties.

| SIC # | Industry (- subdivision) | Per Capita Establishments | | Percent of all U.S. Establishments in Capitals (test statistic) |
		Ratio of Median Capital to Comparison County Median	Percent of Capitals Greater than Comparison County Median (test statistic)	
Traditional, Direct Rent Seeking Industries				
6730	-Trusts	2.210	78.43% (4.06)***	14.83% (14.04)***
6732	- Educational, religious, etc. trusts	2.432	74.51% (3.50)***	16.03% (11.76)***
6733	- Trusts, n.e.c.	1.858	74.51% (3.50)***	14.01% (8.64)***
8100	- Legal services	1.516	88.24% (5.46)***	12.13% (41.01)***
8600	-Membership organizations	1.590	84.31% (4.90)***	9.73% (9.14)***
8610	- Business associations	3.312	96.08% (6.58)***	20.16% (45.90)***
8620	- Professional organizations	4.574	96.08% (6.58)***	25.48% (43.17)***
8630	- Labor organizations	1.833	80.39% (4.34)***	11.43% (10.59)***
8640	- Civic and social associations	1.499	90.20% (5.74)***	10.10% (6.39)***
8650	- Political organizations	11.157	92.16% (6.02)***	28.94% (29.75)***
8660	- Religious organizations	1.154	66.67% (2.38)***	7.23% (-26.37)***
8690	- Membership organizations, n.e.c.	2.201	96.18% (6.58)***	13.94% (17.02)***
8740	- Management and public relations	1.570	90.20% (5.74)***	13.53% (45.05)***
8742	- Management consulting services	1.362	76.47% (3.78)***	13.30% (28.82)***
8743	- Public relations services	4.771	94.12% (6.30)***	20.70% (29.59)***
8748	- Business consulting, n.e.c.	1.614	84.31% (4.90)***	13.80% (21.83)***
In-kind, Direct Rent Seeking Industries				
5812	- Eating places	1.142	84.31% (4.90)***	9.46% (5.38)***
7299	- Miscellaneous personal services	1.032	56.86% (0.98)	10.39% (5.51)***
7992	- Public golf courses	0.861	47.06% (-0.42)	6.60% (-5.81)***
7997	- Membership sports and rec. clubs	0.952	39.22% (-1.54)*	7.34% (-7.74)***
Indirect Rent Seeking Industries				
2700	- Printing and publishing	1.158	66.67% (2.38)***	10.73% (13.49)***
2710	- Newspapers	1.314	64.71% (2.10)***	7.08% (-6.76)***
2720	- Periodicals	1.317	70.59% (2.94)***	13.38% (10.26)***
2740	- Miscellaneous publishing	1.251	56.86% (0.98)	12.60% (7.23)***
3993	- Signs and advertising specialities	1.319	62.75% (1.82)**	11.36% (5.23)***
4830	- Radio and television broadcasting	1.265	66.67% (2.38)***	9.83% (2.04)**
7310	- Advertising	1.311	72.55% (3.22)***	12.71% (17.44)***
7311	- Advertising agencies	1.555	72.55% (3.22)***	13.45% (17.20)***
7312	- Outdoor advertising services	1.413	62.75% (1.82)**	11.16% (2.41)***
7313	- Radio, TV, publisher reps.	0.962	47.06% (-0.42)	10.96% (2.62)***
7319	- Advertising, n.e.c.	0.883	45.10% (-0.70)	11.62% (3.93)***
7331	- Direct mail advertising services	1.550	70.59% (2.94)***	11.93% (6.07)***
8733	- Noncommercial research orgs.	1.924	82.35% (4.62)***	20.55% (22.04)***

Note. *** indicates statistical significance at the 1% level, ** at 5%, and * at 10%. Critical values from binomial probability distribution.

The first part of the table lists industries which likely reflect the more traditional types of direct rent seeking. These include the trusts, legal services, membership organizations, and consulting and public relations industries. With the only exception being religious organizations, all of these industries are significantly higher in capital areas. Political, professional, and business organizations and public relations services are the most expanded. The median capital has 2 to 5 times as many establishments in these industries as

the average noncapital area. In addition, over 90% of the capitals individually have more establishments per capita in these industries than the noncapital national average. The final column, showing concentration of these establishments in capitals, shows that 20 to 30 percent of all U.S. establishments in these industries are located in capitals. This is significantly higher than the average, from which only 9.2 percent of all U.S. establishments across all industries are located in capitals. The results are surprisingly unchanged when the comparison group is changed to the smaller sample of more similar (urban) counties in Table 1b. On average, the differences and their significance grows in size, particularly for the most important rent seeking industries like political organizations.

The middle part of the table shows several industries reflecting the in-kind rent seeking of Mixon, Laband, and Ekelund (1994). We replicate their choices of eating establishments and golf courses. In addition, we include miscellaneous personal services, which includes escort and massage services. We confirm their finding that eating establishments are significantly expanded in capitals, with over 90 percent of the capitals having more than the per capita noncapital average, and 84 percent having more than the median matched pair county. We cannot find support for the golf course effect they identify, but this may be partially due to the SIC data, which directly includes public golf courses, but combines private golf courses in with other membership sports and recreation clubs, which we find to be significantly lower in capitals than noncapitals.

Finally, and most important, the bottom portion of the table lists the new category we introduce in this paper, indirect rent seeking activities. These include printing and publishing of policy papers and books, outdoor (billboard) advertising, television and radio, direct mailings, and noncommercial research organizations (policy institutes).[11] Of the 13 industries listed, the data confirm our hypothesis that these are indeed expanded for the majority of cases. Particularly expanded are periodical printing and publishing, advertising agencies, and noncommercial research organizations. These results support our hypothesis that indirect rent seeking activity is an important component of the lost rent seeking in the Tullock paradox, perhaps even much more important than the in-kind rent seeking introduced by Mixon, Laband, and Ekelund (1994).

Briefly comparing the results from Table 1a (that use the average across all noncapital areas as the comparison group) with those from Table 1b (that use the median across a sample of matched pair counties) shows that the results are, surprisingly much stronger in Table 1b. We had worried that because capital areas tend to be more urban than the average noncapital area that the use of the broader comparison group might result in our results being

larger simply because capitals were more urban. In the data, the opposite appears to be true, the comparison with more equally matched counties actually strengthens the results. For the first measure (ratio of per capita in median capital to comparison group) 27 of the 33 industries show larger expansions in Table 1b than in Table 1a, and for the second measure (percent of capitals greater than the comparison group) each and every one of the 33 industries shows a larger expansion.

To estimate the relative economic magnitudes of these expansions, the results from Tables 1a and 1b were used in combination with 1992 Economic Census data for each of these industries on U.S. average revenue and employment per establishment in the industry. This allows us to put an exact dollar figure on these expansions for both the median capital, and all capitals combined. The results of these calculations are shown in Table 2.

In the traditional rent seeking industries, the largest expansions come in membership organizations and legal services. The median capital has 369 establishments classified as membership organizations, of which we estimate that 121 are excess relative to what would be expected in a similar size noncapital area. This amounts to additional employment in membership organizations in the median capital of 1,072, and just over $51 million in additional excess revenue. There is an additional excess of 74 legal service establishments generating $45.5 million in legal services in the median capital relative to a similar noncapital. In total, the traditional rent seeking industries are expanded by 195 establishments, 3,023 employees, and a value of $192.3 in economic output in the median capital relative to a similar noncapital area. Jointly, traditional rent seeking industries across all capitals are expanded by a total of 14,980 establishments, 107,018 employees, and $9.08 billion in economic output.[12]

The in-kind direct rent seeking industries are dominated by the expansions in Mixon, Laband, and Ekelund's area of eating establishments and miscellaneous personal services (which include personal escort services, massage services, etc.). In total, the in-kind industries listed are estimated to expand by 70 establishments, 1,270 employees, and a value of $35.9 million in economic output in the median capital, or 5,487 establishments, 100,231 employees, and $2.8 billion in economic output across all capitals.

Finally, the indirect industries are dominated economically by expansions in printing and publishing policy papers, radio and television broadcasting, and advertising. The total expansion for this group of indirect industries is 17 establishments, 327 employees, and $35.8 million of output in the median capital, or 1,676 establishments, 30,467 employees, and $3.3 billion in output across all capitals. It is important to note, however, that this total is based on a summation of the finer subdivisions and not the major industry totals

Table 2. Estimated value of rent seeking activity in capitals.

		Median Capital				All Capitals			
		Establishments		Excess Employ-ment	Excess Revenue (millions)	Establishments		Excess Employ-ment	Excess Revenue (millions)
SIC #	Industry (- subdivision)	Actual	Excess			Actual	Excess		
Traditional, Direct Rent Seeking Industries									
6730	Trusts	9	4	26	$2.5	770	330	2,204	$215.8
6732	- Educational, religious, etc. trusts	4	2	15	1.5	397	178	1,474	145.8
6733	- Trusts, n.e.c.	3	1	5	0.4	377	110	577	55.6
8100	Legal services	239	74	432	45.5	19,838	6,104	35,851	3,773.4
8600	Membership organizations	369	121	1,072	51.2	23,710	7,788	68,851	3,290.2
8610	- Business associations	47	32	241	24.0	2,952	1,997	15,168	1,509.7
8620	- Professional organizations	25	19	194	18.4	1,496	1,128	11,584	1,103.3
8630	- Labor organizations	29	11	99	6.6	2,151	826	7,338	492.3
8640	- Civic and social associations	62	19	179	6.1	4,219	1,320	12,202	416.4
8650	- Political organizations	8	6	27	2.4	549	440	1,863	162.7
8690	- Membership organizations, n.e.c.	24	11	103	6.4	1,500	683	6,452	397.6
8740	Management and public relations	142	40	384	26.4	12,228	3,454	33,108	2,276.4
8742	- Management consulting services	48	7	61	4.0	5,493	820	6,978	455.4
8743	- Public relations services	11	6	38	3.3	1,144	646	3,924	345.3
8748	- Business consulting, n.e.c.	23	6	32	2.0	2,591	730	3,606	226.6
In-kind, Direct Rent Seeking Industries									
5812	Eating places	413	65	1,246	$34.9	32,634	5,169	98,444	$2,760.9
7299	Miscellaneous personal services, n.e.c.	25	4	24	0.9	1,844	319	1,787	69.8
Indirect Rent Seeking Industries									
2700	Printing and publishing	76	17	384	$42.6	6,942	1,509	35,114	$3,889.6
2720	- Periodicals	7	2	37	7.0	674	153	3,578	669.7
2740	- Miscellaneous publishing	4	1	13	2.3	477	95	1,603	274.5
3993	Signs and advertising specialities	6	2	27	2.0	555	165	2,525	182.9
4830	Radio and television broadcasting	14	4	103	11.8	861	225	6,314	725.6
7310	Advertising	28	6	70	6.0	2,623	598	6,542	563.9
7311	- Advertising agencies	18	6	61	5.9	1,839	602	6,264	599.5
7312	- Outdoor advertising services	2	0.2	2	0.3	141	12	129	18.6
7331	Direct mail advertising services	6	2	42	3.1	492	162	3,462	253.3
8733	Noncommercial research organizations	4	2	41	3.5	647	261	6,592	566.0
Totals by Category (of finest subdivisions)									
	Traditional, Direct Rent Seeking Industries	523	195	1,426	$120.6	42,707	14,980	107,018	$9,084.2
	In-kind, Direct Rent Seeking Industries	438	70	1,270	35.9	34,478	5,487	100,231	2,830.7
	Indirect Rent Seeking Industries	61	17	327	35.8	5,686	1,676	30,467	3,290.2
Total all Rent Seeking Industries		1,022	282	3,023	$192.3	82,871	22,143	237,716	$15,205.0

Note. For industries which are shown in total and with subdivisions, only the subdivisions indicated with ("-") were included in calculating the totals at the bottom of the table. Thus, not all of printing and publishing is included, only the two subdivisions shown. The estimates were based on establishment counts and employment data from *1995 County Business Patterns* and revenue per firm from *1992 Economic Census*, both from the U.S. Census Bureau. Excess calculations are based on the ratio of median capital to noncapital average for the industry from Table 1. Only industries with positive expansions are shown (i.e., those in Table 1 with ratios less than 1 are excluded here).

shown. Thus, for example, only the periodicals and miscellaneous publishing expansions are included in the total, and *not* the amount for the entire industry of printing and publishing. Had the larger total for printing and publishing been used, the total for this category would have doubled. However, most of the other expansions within this industry are in commercial printing and business forms, which we believe are mostly due to the administrative costs

of government, and thus are not included as part of the indirect rent seeking industry.

Jointly, the results from Table 2 suggest that activity in indirect rent seeking industries is just over one-third the size of the measured activity in traditional rent seeking industries. It is larger than the in-kind industries included in the analysis as well. Most importantly, the addition of Mixon, Laband, and Ekelund's in-kind industries and our indirect industries results in the total measured rent seeking activity almost doubling. This certainly suggests that these extensions help to resolve at least some of the lost rent seeking in the Tullock paradox.

The final row in the table shows the total summation of the finer subdivisions associated with all three types of rent seeking. Our estimates here suggest that total rent seeking activity in state capital cities in these industries alone is about $15.2 billion, which for comparison is or just over 2 percent of current state government spending.

In an attempt to even better estimate this total, as well as the marginal effect of an increase in government spending, we performed a cross-sectional regression for each industry listed in Table 2. We did not attempt to specify the determinants of each industry, but rather our intention was to see whether a regression methodology on this same data, trying to isolate only the effect of state government spending on these industries, would produce similar supporting results. The regression included state government spending divided into two components, administrative and non-administrative government spending, and control variables for per capita income and the length of the legislative session in days. The coefficients on nonadministrative government spending reflected how an increase in potentially rent seeking expenditure affected each industry. These estimates were then combined with the data on establishment revenue from Table 2 to calculate the estimated increase in the size of the industry per $1,000 additional in nonadministrative government spending, and also the total estimated increase in industry size due to all nonadministrative state government spending in the average state capital and all capitals combined. The results are shown in Table 3.

The results in Table 3 suggest that each $1,000 of additional nonadministrative state government spending results in only approximately $26.01 additional rent seeking across these industries combined. Our estimates suggest that the average capital has about $434 million in rent seeking, or a total of $21.69 billion of rent seeking in all state capitals combined. This compares favorably to our earlier estimates in Table 2, which placed total rent seeking at about $15.2 billion.

Table 3. Regression estimates of marginal effect of government spending on rent seeking.

	Estimated marginal increase per $1,000 additional government spending	Total estimated expansion in average capital (millions)	Total estimated expansion in all state capitals (millions)
Traditional, Direct Rent Seeking Industries			
6730 Trusts	$0.07	$1.23	$61.73
6732 - Educational, religious, etc. trusts	0.05	0.83	41.70
6733 - Trusts, n.e.c.	0.03	0.44	22.05
8100 Legal services	2.53	42.14	2,107.09
8600 Membership organizations	6.17	102.96	5,147.80
8610 - Business associations	0.95	15.81	790.73
8620 - Professional organizations	0.84	13.95	697.33
8630 - Labor organizations	0.53	8.84	441.83
8640 - Civic and social associations	0.44	7.27	363.54
8650 - Political organizations	0.13	2.16	107.80
8660 - Religious organizations	3.45	57.58	2,878.99
8690 - Membership organizations, n.e.c.	0.24	3.97	198.37
8740 Management and public relations	5.12	85.34	4,266.76
8742 - Management consulting services	1.38	22.99	1,149.55
8743 - Public relations services	0.24	4.02	200.94
8748 - Business consulting, n.e.c.	0.74	12.29	614.60
In-kind, Direct Rent Seeking Industries			
5812 Eating places	$8.12	$135.40	$6,769.92
7299 Miscellaneous personal services, n.e.c.	0.43	7.15	357.43
7992 Public golf courses	0.14	2.26	113.12
7997 Membership sports and recreation clubs	0.37	6.11	305.49
Indirect Rent Seeking Industries			
2700 Printing and publishing	$9.51	$158.63	$7,931.40
2710 - Newspapers	0.54	8.96	448.21
2720 - Periodicals	1.05	17.51	875.47
2740 - Miscellaneous publishing	0.71	11.78	589.23
3993 Signs and advertising specialities	0.27	4.58	228.79
4830 Radio and television broadcasting	0.81	13.58	679.05
7310 Advertising	1.58	26.31	1,315.65
7311 - Advertising agencies	0.90	14.99	749.72
7312 - Outdoor advertising services	0.31	5.23	261.26
7313 - Radio, TV, publisher representatives	0.07	1.23	61.45
7319 - Advertising, n.e.c.	0.32	5.35	267.43
7331 Direct mail advertising services	0.06	1.02	50.93
8733 Noncommercial research organizations	0.38	6.33	316.73
Totals by Category (of finest subdivisions)			
Traditional, Direct Rent Seeking Industries	$11.53	$192.29	$9,614.53
In-kind, Direct Rent Seeking Industries	9.05	150.92	7,545.96
Indirect Rent Seeking Industries	5.43	90.57	4,528.27
Total all Rent Seeking Industries	$26.01	$433.78	$21,688.76

Note. See note for Table 2.

4. Other potential rent seeking industries

Because our list of 33 industries in Tables 1a and 1b were selected *a priori*, we wanted to make sure that we had not overlooked other industries which may reflect rent seeking activity. In addition, we were interested to see which industries best represented this type of activity, so that other researchers may use this data in the future. As we mentioned earlier, this data is available as a
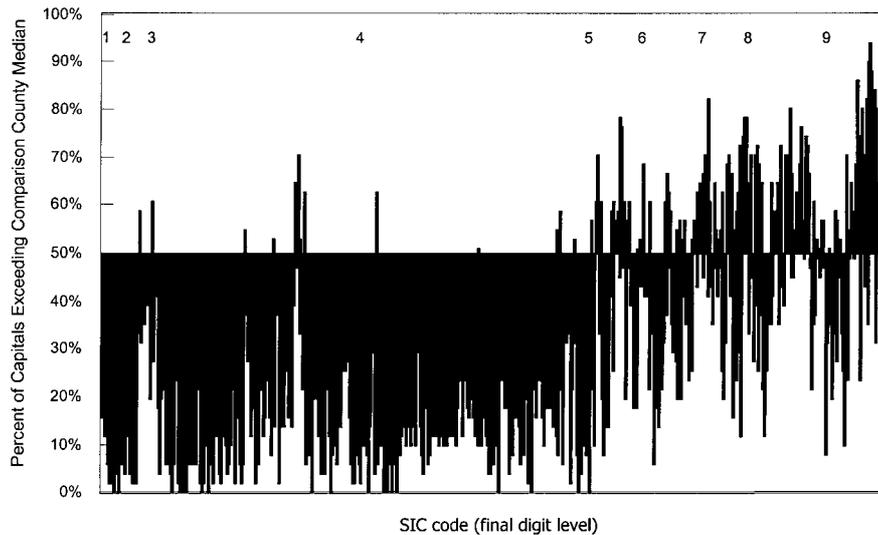
KEY: (1) = Ag., Forestry, Fishing; (2) = Mining; (3) = Construction; (4) = Manufacturing; (5) = Trans. & Utilities; (6) = Wholesale Trade; (7) = Retail Trade; (8) = Financial Industries; (9) = Services

Figure 1. Percent of capitals with per capita establishments exceeding comparison county median.

fairly long time series for each capital and could be very valuable for future research to explore the effects of state level interest groups on state government activities. Thus we decided to construct the measures from Table 1b for each and every one of the 1,135 industries available relative to the matched pair counties. Perhaps our most interesting finding comes from this analysis when it is presented on a large scale because it allows us to see not only which industries are expanded, but also which are contracted.

Figure 1 shows the percent of capitals with per capita establishments greater than the median of the noncapital matched counties. Because our analysis is at the final (3 or 4) digit level, the huge number of industries prevent us from labeling each industry in the following graph, however it is possible to separate the main categories (such as manufacturing, retail trade, services, etc.) and discuss some of the large outliers. We have normalized the bars around 50%, which is the null expectation if the distribution of per capita establishments was identical in capitals and noncapitals. Bars less than 50% show that the industry generally tends to be smaller in a majority of capitals relative to noncapitals, and a bar above 50% shows the industry is expanded in a majority of capitals. The industries are shown in increasing order of SIC code number, and dashed bars divide the 9 major categories.

The industries within agriculture, forestry, and fishing are all contracted, as are all in mining. Construction industries are expanded with the exception of heavy construction except building. Manufacturing is contracted across the board except for printing and publishing. Transportation and utilities are generally contracted with the exception of air transportation and communications (radio and TV). Wholesale trade is split with an expansion in durable goods, and a contraction in nondurable goods. Retail trade is contracted for traditional home-type retail such as food stores and building and garden supplies, but is expanded for apparel, automobiles, and eating and drinking establishments. Finance, insurance, and real estate is expanded across the board, and services are expanded across the board with the exceptions of hotels and lodging and motion pictures. At this point we want the reader to abstract from the individual industries and focus on the reallocation effects in general. Clearly, the activity surrounding a capital reallocates resources away from traditional industries (such as manufacturing) and toward retail trade, services, and financial industries (the particular industries that are expanded the most will be analyzed momentarily). This again is strongly consistent with the idea that these expansions in rent seeking and interest group activities detract resources away from other productive activities and create a net social loss. These figures presented here are what we believe to be the first demonstrations that these losses exist on real industry-level data. We realize that much of the rent seeking resources flow into capitals from other geographic areas, and the opportunity cost of these resources lies elsewhere, but it is nonetheless interesting to witness how the stock of resources in capitals is reallocated.

In the figures it is apparent that there is a significant reallocation of resources due to the presence of a political institution in the capital area. Of course, not all of the expansions shown are due to rent-seeking, some of the distortions are due to other reasonable factors such as the administrative costs of government and its agencies, and some are due to the nature of having traveling legislators and staff. However, some of the reallocation are due to the presence of interest groups and rent seeking activity, and the related demands they place on local economic activity. Our evidence is consistent with these activities causing net social losses due to forgone productive economic activity in other areas, and is the first such demonstration of this effect. Clearly had we been able to include the opportunity costs in forgone activities in geographic areas outside capitals, the losses would appear even greater relative to the expansions.

After performing a similarly broad estimating procedure for each of our measures, we now generate a "top 50" list of industries expanded in capitals. To generate this list, we first constructed our measures for each industry, then

Table 4. Top 50 industries expanded in capital counties versus comparison counties.

SIC	Industry	Per Capita Establishments		Percent of all U.S. Establishments in Capital Counties (rank)		Avg. Rank
		Ratio of Median Capital to Comparison County Median (rank)	Percent of Capitals Greater than Comparison County Median (rank)			
8650	Political organizations	11.157 1	92.16% 5	28.94%	4	3.3
8620	Professional organizations	4.574 6	96.08% 1	25.48%	6	4.3
8743	Public relations services	4.771 5	94.12% 4	20.70%	10	6.3
8610	Business associations	3.320 11	96.08% 1	20.16%	13	8.3
7375	Information retrieval services	5.798 2	82.35% 15	16.35%	18	11.7
8390	Social services, n.e.c.	2.037 23	90.20% 6	16.07%	20	16.3
8733	Noncommercial research organizations	1.924 27	82.35% 15	20.55%	12	18.0
6321	Accident and health insurance	5.627 3	72.55% 49	22.36%	8	20.0
6324	Hospital and medical service plans	2.244 18	78.43% 25	15.96%	22	21.7
8690	Membership organizations, n.e.c.	2.201 20	96.08% 1	13.94%	48	23.0
6310	Life insurance	1.978 24	80.39% 18	15.09%	30	24.0
8712	Architectural services	1.812 34	84.31% 11	15.28%	29	24.7
6732	Educational, religious, etc. trusts	2.433 15	74.51% 41	16.03%	21	25.7
7520	Automobile parking	4.465 8	68.63% 72	20.01%	14	31.3
7376	Computer facilities management	4.530 7	68.63% 72	15.03%	31	36.7
6370	Pension, health, and welfare funds	1.871 28	72.55% 49	14.89%	34	37.0
8290	Schools and educational services, n.e.c.	1.744 41	84.31% 11	13.50%	60	37.3
6733	Trusts, n.e.c.	1.858 29	74.51% 41	14.01%	45	38.3
8748	Business consulting, n.e.c.	1.614 54	84.31% 11	13.80%	53	39.3
7323	Credit reporting services	1.845 30	72.55% 49	13.98%	47	42.0
7334	Photocopying and duplicating services	1.496 70	78.43% 25	14.76%	35	43.3
7338	Secretarial and court reporting	1.752 40	80.39% 18	12.88%	75	44.3
6794	Patent owners and lessors	2.602 14	72.55% 49	12.73%	81	48.0
7374	Data processing and preparation	1.667 50	80.39% 18	12.86%	76	48.0
2791	Typesetting	2.067 22	68.63% 72	13.59%	57	50.3
6280	Security and commodity services	1.639 52	70.59% 61	14.26%	42	51.7
8900	Services, n.e.c.	1.738 43	80.39% 18	12.27%	97	52.7
8240	Vocational schools	1.469 75	74.51% 41	13.90%	50	55.3
7311	Advertising agencies	1.555 57	72.55% 49	13.45%	64	56.7
8100	Legal services	1.516 64	88.24% 8	12.13%	105	59.0
5044	Office equipment	1.710 46	78.43% 25	12.13%	106	59.0
6330	Fire, marine, and casualty insurance	1.485 73	78.43% 25	12.65%	84	60.7
8630	Labor organizations	1.833 32	80.39% 18	11.43%	133	61.0
4510	Air transportation, scheduled	1.387 94	76.47% 35	13.47%	62	63.7
7373	Computer integrated systems design	1.406 91	78.43% 25	12.66%	83	66.3
5045	Computers, peripherals and software	1.506 65	78.43% 25	11.96%	110	66.7
8742	Management consulting services	1.362 99	76.47% 35	13.30%	68	67.3
7382	Security systems services	1.733 44	74.51% 41	11.76%	121	68.7
7379	Computer related services, n.e.c.	1.608 55	78.43% 25	11.56%	126	68.7
6360	Title insurance	1.677 49	66.67% 92	13.37%	66	69.0
8711	Engineering services	1.529 63	78.43% 25	11.74%	122	70.0
7922	Theatrical producers and services	1.545 60	74.51% 41	11.98%	109	70.0
7250	Shoe repair and shoeshine parlors	1.491 71	72.55% 49	12.00%	108	76.0
7331	Direct mail advertising services	1.550 58	70.59% 61	11.93%	112	77.0
7335	Commercial photography	1.776 38	64.71% 112	12.68%	82	77.3
8741	Management services	1.435 86	76.47% 35	11.90%	115	78.7
2720	Periodicals	1.317 112	70.59% 61	13.38%	65	79.3
1795	Wrecking and demolition work	2.219 19	66.67% 92	11.55%	127	79.3
8744	Facilities support services	2.309 17	62.75% 135	12.44%	88	80.0
6710	Holding offices	1.977 25	88.24% 8	10.28%	212	81.7

Note. Rank is the ranking of the industry across all 879 final digit industries by that measure.

we ranked each industry by each measure. We then averaged the ranks across all three measures, and the top 50 industries from this analysis are given in Table 4.

The table confirms our prior hypothesis, that the 86– association industries, such as 8620 professional organizations, 8650 political organizations,

and 8610 business associations, are indeed the best measures of traditional interest group activity available in this data. They rise to the top of all three measures as the industries most expanded in capitals relative to noncapital areas. Again, we believe that constructing a time series of these industries would be very valuable for exploring interest group activity at the state level and how it has affected state governments. In addition, public relations services (8743), trusts (6732), consulting (8748), and legal services (8100) are also contenders in this area of measuring traditional rent seeking activity. The table also confirms some of our a priori selected industries as measures of indirect rent seeking, particularly, 8733 noncommercial research organizations, 7311 advertising agencies, and 7331 direct mailing services. Interestingly, several additional industries appear which likely should be included among the list of rent seeking industries, including 7375 information retrieval services, 6324 medical service plans and 6370 pension, health and welfare funds. It is likely that these cluster around legislative centers because of the regulation and large effects of public policy on these industries. Finally, among the list are also the industries which are administrative or support industries for general government administration, including 7334 photocopying, 7338 secretarial and court reporting, 4510 air transportation, 5044 office equipment, 7378 computer repair, and 7349 building maintenance services. However, based on this ranking list, we believe that the industries identified in Table 1 were a representative and accurate sample of the most important industries at measuring interest group and rent seeking activity.

5. Conclusion

In this paper we have explored several aspects of rent seeking activity in state capitals. First, we introduced the notion of indirect rent seeking as an additional source of rent seeking activity above the traditional types of rent seeking, and the in-kind rent seeking of Mixon, Laband, and Ekelund. This indirect rent seeking is the attempts to sway outcomes of the political process through publications of policy papers, radio and television time, demonstrations, and the like which are frequently observed in capital cities. We find evidence that these activities are significant in capitals and thus, just like in-kind rent seeking, likely account for part of the missing rent seeking expenditures in the Tullock paradox. Our estimates suggest that including both almost doubles the size of measured rent seeking activity. Our rough estimates place the total amount of rent seeking in state capitals somewhere between $15.2 and $21.7 billion. We also identified several industries which appear to measure interest group and rent seeking activity. This data is available for each state capital, and future researchers could easily construct a time

series of activity in these industries to further explore the effects of state-level interest groups on state government activity.

Finally, using the data we presented a striking figure showing the reallocation of resources due to the presence of a political institution in state capitals. In the figure, there is clearly an across the board reductions in traditional economic activity (manufacturing, for example), with the resources being injected into specific industries (such as public relations, television and radio, consulting, legal services, advertising, research institutes, and political organizations). This demonstrates the presence of the opportunity cost of these resources in terms of forgone productive activities. We believe that this is the first such demonstration of these effects.

Our results have several important implications for the rent seeking literature. First is the notion of indirect rent seeking being an important component of attempts to manipulate outcomes of the political process. Second is the identification of a new data source for future empirical research in state-level interest group activity. Finally, we have put a specific industry context on the heavily cited phenomenon of the opportunity cost of resources drawn into political activity.

Notes

1. Mixon (1995) and Mixon, Laband, and Ekelund (1994) use capital city and noncapital city comparisons to find evidence of hidden rent-seeking in that limousine services, golf courses, and sit-down restaurants are more prevalent in capitals. Laband and Sophocleus (1988) also represents an early milestone in the measurement of the social cost of rent seeking. Sollars (1996) explores how population and income growth in state capital cities differs from noncapital areas because of the effects of rent seeking.
2. See Harberger (1954, 1959).
3. See Tullock (1993) for a history and comprehensive treatment of these issues.
4. For examples of the extensions of the basic model that produce these different results in a theoretical context see McChesney (1987), Ellingsen (1991), and Tollison (1982).
5. See Tullock (1980, 1989, 1997, 1998) for his assessment and explanations of why measured rent seeking appears to be less than would be predicted by theory.
6. Mixon, Laband, and Ekelund (1994) page 172.
7. The set of 50 comparison counties was chosen by taking one noncapital county from each state that was closest in population to the capital county.
8. It is, however, instructive to distinguish between intra industry and inter industry comparisons of this manner. The competitive model predicts that for most industries, firms within an industry will be of roughly equal size as they all cluster toward the output level that minimizes the standard U-shaped long-run average total cost curves for their industry. Thus, an expansion in the number of establishments *within* a specific industry can generally be interpreted as an expansion in the output of the industry. This same comparison cannot be made across industries, however. Our data afford results such as capitals tend to have 5 more establishments in industry A, and 3 less in industry B, than

noncapitals. Without an ability to weight establishments by economic value, conclusions about net social losses are prevented.

9. To avoid problems with outliers we use median values whenever possible (for both the capitals and the matched pair noncapital counties). For the other comparison group we use the average across noncapital areas simply because it would have been prohibitively costly for us to get data for every industry in every noncapital county of the U.S. to construct a median value across all these counties. We have the totals for the entire U.S., and the data for the capitals for each industry. By subtraction we can obtain the total number of establishments in noncapital areas, and then find this average on a per capita basis.

10. Under the null hypothesis that capitals and noncapitals have similar distributions, we should expect that roughly half of all capitals should have per capita establishments above, and about half below, the noncapital median and/or average (and this 50% null is confirmed by a raw average across all industries, which is 50.13%, see Table 1a). Thus, it should be just as likely to find a capital with an above average per capita value as a below per capita value. Based upon this null hypothesis, it is possible to construct test statistics for whether capitals have significantly higher or lower establishments per capita than the remaining noncapital areas of the United States that is identical to the test statistics for the percentage of heads in a coin flipping experiment (binomial distribution with standard critical values). The test statistic for the concentration measure below is similar, with the exception that the baseline probability is the average concentration, which is 9.2%.

11. It is worth noting that some publishing is in service to the administration of government, such as letterhead, etc. These are not included in the categories listed, but are in the categories for manifold business forms and commercial printing which are a part of the total for 2700 printing and publishing, but not for the subgroups.

12. An alternative measure might simply be to include the total value of revenues in these industries, assuming all of the spending was rent seeking related. Also if the percent of, say, the base underlying restaurant spending that is rent seeking is higher in capitals, that our results may be smaller than the true value of rent seeking.

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Appendix 1. Listing of capital and comparison counties

State	Capital County	Capital County Population	Comparison County	Comparison County Popularion	State	Capital County	Capital County Population	Comparison County	Comparison County Population
AL	Montgomery	217,666	Tuscaloosa	161,435	MO	Cole	67,754	Platte	69,994
AK	Juneau Bureau	29,147	Kenai	48,993	MT	Lewis & Clark	52,690	Gallatin	62,561
AZ	Maricopa	2,526,113	Pima	803,618	NE	Lancaster	235,537	Sarpy	120,329
AR	Pulaski	350,950	Washington	146,593	NV	Carson City	46,550	Elko	46,021
CA	Sacramento	1,103,242	Alameda	1,415,582	NH	Merrimack	123,209	Strafford	109,498
CO	Denver	494,462	El Paso	499,994	NJ	Mercer	329,242	Somerset	282,274
CT	Hartford	831,941	Fairfield	837,476	NM	Santa Fe	116,861	San Juan	106,169
DE	Kent	121,020	Sussex	137,193	NY	Albany	297,952	Rockland	280,968
DC	–	552,304	–	–	NC	Wake	514,500	Mecklenburg	630,813
FL	Leon	213,696	Collier	199,775	ND	Burleigh	64,745	Ward	58,540
GA	Fulton	701,005	Cobb	566,060	OH	Franklin	1,008,204	Cuyahoga	1,380,428
HI	Honolulu	869,147	Hawaii	141,805	OK	Oklahoma	623,871	Tulsa	543,417
ID	Ada	252,041	Canyon	120,385	OR	Marion	256,058	Lane	313,344
IL	Sangamon	190,840	Peoria	181,505	PA	Dauphin	245,496	Erie	278,114
IN	Marion	815,011	Lake	480,969	RI	Providence	579,415	Kent	161,418
IA	Polk	350,434	Linn	182,779	SC	Richland	299,375	Charleston	316,606
KS	Shawnee	164,738	Wyandotte	151,379	SD	Hughes	15,525	Beadle	17,134
KY	Franklin	45,932	Oldham	44,436	TN	Davidson	530,250	Knox	374,693
LA	East Baton Rouge	395,820	Jefferson	449,708	TX	Travis	667,653	El Paso	694,603
ME	Kennebec	116,723	Androscoggin	101,266	UT	Salt Lake	814,720	Utah	339,904
MD	Anne Arundel	461,309	Baltimore	721,556	VT	Washington	56,198	Windsor	55,367
MA	Suffolk	645,520	Norfolk	642,089	VA	Richmond City	193,306	Chesapeake City	202,759
MI	Genesee	434,065	Kent	544,781	WA	Thurston	192,329	Yakima	218,808
MN	Hennepin	1,051,961	Ramsey	486,254	WV	Kanawha	205,633	Cabell	94,112
MS	Hinds	249,906	Harrison	177,194	WI	Dane	392,198	Waukesha	353,035
					WY	Laramie	78,312	Natrona	63,241