Economic, Political, and Bureaucratic Factors Influencing a Public Agency's Contract Decisions

by

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VIII. REVISITING THE ROLE OF DISTRIBUTIVE POLITICS IN GOVERNMENT CONTRACTING

A. Introduction

The role of distributive politics is revisited in this chapter by examining the influence of mayoral regimes and the nature of the private firm on the agency's contract decisions. This chapter examines whether the policy model factors and self-interest model factors provide the same explanation of the agency's contract decisions under different regimes and different types of private firms. Seven different pools of contracting events are identified in order to measure the influence of each regime and type of private firm, and a micro-analysis of mayoral influence using interactive variables is used to further study the influence of political and administrative factors.

Several key questions regarding the agency's contracting process will be answered by the pool analysis and micro-analysis. Does the total population sample accurately represent those contract decisions that took place only during Byrne's regime? Only during Washington's regime? Only during Sawyer's regime? Only during Daley's regime? Likewise, does the total population sample accurately represent those contract decisions involving only firms located in the city of Chicago? Only those firms with sales to the agency of less than $250,000? Only those firms owned by an economically disadvantaged person? If the total

population does not accurately represent each pool of contracting events, in what ways do the pools differ? Are the political factors more effective in explaining change in contractor under certain mayors and not the other mayors?

In order to answer all of the above questions except the last question, a pool analysis is used to sort the total population sample into seven different pools through the use of a unique characteristic that distinguishes each pool of contract decisions. In order to answer the last question, a micro-analysis using indicator variables for each mayor and interactive terms is used so the analysis includes the total population sample rather than the smaller samplings called pools.

B. Pool Analysis

The definition of each contract pool is based on a unique characteristic that distinguishes one pool of contract decisions from the other six pools of contract decisions. Four of the seven pools contain contract decisions from each of the four mayoral terms, and these four pools are mutually exclusive pools. The other three pools contain contract decisions for three different types of private firms: firms located in the city of Chicago; firms having a total sales to the agency of less than $250,000 during the year of contract award; firms owned by an economically disadvantaged person, i.e., a DBE firm. The last three contract pools are not mutually exclusive pools. However

the unique characteristic used to identify the particular pool of private firm allows us to differentiate the three pools of private firms.

Table XXXVI provides an overview of the seven pools of contract decisions and states the basic question regarding the impact of each pool on the outcome of the agency's contract decisions. The seven pools are intended to test the impact of the different contract circumstances on the distribution of the agency's contract decisions. Logit analysis was performed for each pool. The logit analysis was performed in the same manner as reported in Chapter VI. Table XXXVII summarizes the results of the logit analysis for all the seven pools of firms as well as repeats the regression results for the population sample as reported in Chapter VI, Table XXVIII, column 5. All regression relationships found significant at the 0.10 level of significance are shaded in Table XXXVII.

TABLE XXXVI SEVEN POOLS OF CONTRACTING EVENTS

NAME OF POOL	POOL'S UNIQUE CHARACTERISTIC	NUMBER OF CONTRACT DECISIONS[73]	QUESTION REGARDING THE INFLUENCE OF THE CONTRACTING CIRCUMSTANCE
REGIMES:			
BYRNE'S TERM	BOARD RECOMMENDATIONS SIGNED PRIOR TO NOVEMBER 15, 1984	160	DO INCUMBENT POLITICIANS AND THEIR REGIMES AFFECT THE AGENCY'S CONTRACT DECISIONS DIFFERENTLY?
WASHINGTON'S TERM	BOARD RECOMMENDATIONS SIGNED BETWEEN NOVEMBER 15, 1984 AND JUNE 1, 1988	277	
SAWYER'S TERM	BOARD RECOMMENDATIONS SIGNED BETWEEN JUNE 1, 1988 AND SEPTEMBER 4, 1990	239	
DALEY'S TERM	BOARD RECOMMENDATIONS SIGNED ON OR AFTER SEPTEMBER 4, 1990	143	
PRIVATE FIRMS			
FIRMS LOCATED IN THE CITY OF CHICAGO	FIRMS WITH A CHICAGO ZIP CODE	352	DOES THE FIRM'S PROXIMITY TO THE AGENCY AND ITS CONSTITUENCY AFFECT THE AGENCY'S CONTRACT DECISIONS DIFFERENTLY?
SMALLER FIRMS REGARDLESS OF LOCATION AND TYPE OF FIRM	FIRMS WITH SALES OF LESS THAN $250,000 TO THE AGENCY DURING YEAR OF CONTRACT AWARD	700	DOES FIRM SIZE AFFECT THE AGENCY'S CONTRACT DECISIONS DIFFERENTLY?
DISADVANTAGEOUS BUSINESS ENTERPRISE REGARDLESS OF LOCATION OR FIRM SIZE	FIRMS THAT ARE OWNED AND MANAGED BY AN ECONOMICALLY DISADVANTAGED PERSON	149	DOES THE DBE PARTICIPATION PROGRAM AFFECT THE AGENCY'S CONTRACT DECISIONS DIFFERENTLY?

[73]All contracting events for the four different mayoral terms total 819 or 19 more than the total population sample. The total contracting events from the individual pools exceeds the population sample, because the day identified as the most likely date between mayoral terms was included in both contiguous terms. Since the date was a transition day, the contract recommendation could be made to favor either term and therefore the transition day was included in both contiguous terms. It is believed that the inclusion of the transition day in both contiguous terms does not bias the pool.

TABLE XXXVII LOGIT ANALYSIS FOR THE TOTAL SAMPLE AND SEVEN DIFFERENT POOLS OF CONTRACTING EVENTS

			POOLS: MAYORAL REGIMES				POOLS: PRIVATE FIRMS		
FACTORS	VARIABLE NAME (Variable Number)	TOTAL SAMPLE	BYRNE TERM	WASHINGTON TERM	SAWYER TERM	DALEY TERM	CHICAGO-BASED FIRMS	DBE FIRMS	SMALL FIRMS
Number of cases			81	225	175	102	247	111	397
POLICY MODEL									
FINANCIAL ASPECTS FACTOR	ANNUAL SALES TO THE AGENCY (V7)	.060707 .0308	.00318 .1779	.00178 .0077	.000282 .7451	.000468 .7343	.00121 .1332	.00183 .1717	.00633 .0023
	AUTHORIZED EXPENDITURE (V28)	.00128 .0532	-.00950 .1051	.000873 .4215	.00504 .0070	.00510 .1190	.00154 .2456	-.0040 .2001	.000374 .7564
LOW-BID POSITION FACTOR	LOW-BIDDER (V9)	.4326 .1509	3.0221 .3740	.2768 .6522	.6017 .2815	.3788 .9466	.9913 .0451	.3971 .6365	.5724 .1736
	PERCENT LOW-BID (V10)	.0395 .0001	.1699 .0218	.0982 .0003	.0304 .0241	.0465 .1205	.0654 .0008	.0441 .1441	.0358 .0023
PRICE AND CPI CHANGE FACTOR	PERCENT PRICE CHANGE (V24)	.0474 .0001	.1868 .0314	.0760 .0036	.0431 .0102	.0817 .2037	.0457 .0353	.0697 .1875	.0442 .0013
	ABSOLUTE VALUE OF PRICE CHANGE (V24A)	-.0743 .0001	-.0908 .3525	-.1278 .0005	-.0667 .0046	-.1883 .0316	-.1004 .0005	-.0975 .1359	-.0840 .0001
	CONSUMER PRICE INDEX (V13)	-.00391 .4101	-.0860 .1942	.0178 .2469	-.00127 .8993	-.0510 .0517	-.00219 .8086	-.0140 .3708	-.00154 .8005
COMPETITION FACTOR	FIRMS SOLICITED (V11)	-.0536 .0264	.0277 .8815	-.0964 .0381	-.0260 .5799	.00557 .9568	-.0940 .0380	.0355 .6652	-.0581 .0683
	FIRMS BIDDING (V13)	-.1698 .0055	.0335 .9208	-.0266 .7965	-.3219 .0142	-.9178 .0070	-.1404 .1686	-.5947 .0141	-.2651 .0017
	BIDDING/RESPONDING (V61)	.6466 .2252	3.9184 .2469	.3988 .6658	.9462 .3765	6.7696 .0166	1.0907 .2302	1.0291 .6049	.9540 .1460
CONTRACTOR'S PRICING TACTICS FACTOR	FIRM PRICE (V27)	.9512 .0285	2.6311 .2514	2.9911 .0063	1.0872 .2708	2.1171 .2719	.7380 .3180	-3.192 .0457	1.0700 .0535
	ADVANTAGEOUS PRICING TERMS (V38)	-.3227 .1648	-2.1849 .1931	-.5834 .1616	-.3651 .4355	-2.2778 .0850	-.3596 .4379	.6934 .4513	-.1940 .5338
	PERCENT DISCOUNT FOR EARLY PAYMENT (V52)	.00219 .6176	.1730 .0616	.00579 .4748	-.00553 .4229	.1190 .0610	-.0107 .5378	-.0450 .1301	-.00063 .9459
SELF-INTEREST MODEL									
REGIME	PRESENCE OF A POLITICAL REGIME (V6)	-.1130 .5943	-4.0922 .2930	-.1997 .6679	-.4117 .4336	12.0969 .2015	-.7697 .0645	-1.4621 .0989	-.6445 .0422
	POWER OF A POLITICAL REGIME (V58)	.0966 .8247	7.5194 .0056	1.2840 .1836	-.3152 .7914	-.0322 .9856	1.3768 .0817	-.3475 .7889	.4326 .4400
POLITICAL VALUE OF LOCATION FACTORS	FIRM'S LOCATION BASED ON THE 1990 CENSUS (V5)	.0670 .3528	.8804 .0832	.2558 .0530	-.2194 .1695	-.2531 .3516	.2188 .1964	-.2569 .2874	.0350 .6947
CHANGE OF ELECTED AND APPOINTED OFFICIALS	POLITICAL COHESIVENESS (V56)	-.0274 .5666	-.3704 .4497	-.0569 .5999	-.00462 .9713	.4473 .3069	-.0617 .4250	-.1274 .4616	-.0505 .4148
	PURCHASING COHESIVENESS (V57)	.00765 .8729	-.2507 .4255	-.0581 .7001	-.0404 .7520	-.3151 .1207	-.0473 .5679	-.1194 .4841	.0796 .2060
	MANAGEMENT STAFF COHESIVENESS (V63)	-.00498 .9198	-.1729 .8727	.0306 .7600	.0896 .4465	.5176 .2345	.1395 .1631	.3269 .0547	-.0307 .6418

TABLE XXXVII LOGIT ANALYSIS FOR THE TOTAL SAMPLE AND SEVEN DIFFERENT POOLS OF CONTRACTING EVENTS

			POOLS: MAYORAL REGIMES				POOLS: PRIVATE FIRMS		
FACTORS	VARIABLE NAME (Variable Number)	TOTAL SAMPLE	BYRNE TERM	WASHINGTON TERM	SAWYER TERM	DALEY TERM	CHICAGO-BASED FIRMS	DBE FIRMS	SMALL FIRMS
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	DAYS FOR PRE-BID AND BID SOLICITATION (TDAYS1)	-.00206 .0327	-.0327 .0576	-.00166 .2974	-.00234 .2762	.00397 .2271	-.00114 .4743	-.00115 .5460	-.00101 .3946
	DAYS FOR CONTRACT OFFICER REVIEW (TDAYS2)	-.00016 .9269	.0945 .0570	-.00719 .0380	-.00240 .6352	-.00313 .7559	-.00177 .5768	-.00104 .8736	-.00097 .6473
	DAYS FOR PURCHASING AGENT'S REVIEW (TDAYS3)	-.00375 .1766	-.1064 .0331	.000556 .9869	-.0138 .1552	-.0250 .1419	-.00920 .1189	.00244 .8038	-.00221 .4753
	DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW (TDAYS4)	.00475 .1529	.1139 .2353	.00325 .6541	.0241 .0867	.00510 .7800	.00563 .4420	.00994 .7134	.00270 .5973
	DAYS FOR CONTRACT EXECUTION (TDAYS5)	-.00022 .7705	-.0796 .2149	.00452 .2305	.00587 .4658	-.00187 .4175	-.00102 .5149	.00418 .5764	-.00028 .7904
CONTRACT JUSTIFICATION FACTOR	DBE POLICY ADMINISTRATION (V65)	-1.1572 .0001	-7.1583 .1638	-1.2855 .0469	-1.1472 .0383	1.1818 .1545	-1.6911 .0008	0	-1.0685 .0037
	REMARKS: SIMPLE OR COMPLEX (V25)	-.1996 .4865	-4.9758 .1607	-.5256 .3417	.4055 .4650	.00107 .9994	.9691 .0515	-1.9185 .0689	.4008 .2679
	CONTRACT JUSTIFICATION (S3)	-.00173 .6286	-.0348 .4794	-.00599 .3862	.00156 .7939	-.00051 .9824	-.0108 .0969	-.0287 .1772	.00155 .7458
R^2	GENERALIZED COEFFICIENT OF DETERMINATION	0.3531	0.6998	0.4529	0.4382	0.6901	0.4019	0.4197	0.5021

C. Discussion of Findings of Pool Analysis

Four general conclusions are evident from an overall review of the logit analysis results reported in Table XXXVII. First, there is partial support that distributive politics is operative within the agency's contracting process. Second, distributive politics is used selectively rather than systematically within the agency's contracting process. Third, the economic factors consistently explain the agency's contract decisions for all contract pools and still provides the dominant explanation. Fourth, the economic factors still show the power and advantages of the incumbent contractor across all pools. The generalized coefficient of determination, R^2, (SAS/STAT 1996, Cox 1989), shows that the general research model explains a significant amount of variance in change in contractor, ranging from a low of 42% to a high of 70%.

The ability of distributive politics to explain the awarding of the agency's contracts is supported by the finding that all five self-interest model factors explained change in contractor under at least one contracting circumstance[74]. The total population sample did not accurately represent the agency's contract decisions that took place under different political regimes and contract decisions that benefitted different types of firms. The total population sample did not show any influence of

[74]Each pool is intended to describe a different set of contracting circumstances.

the political regime on change in contractor while political regime did influence the agency's contract decisions under four of the seven contract pools. Likewise, political value of location and change of elected and appointed officials did not explain change in contractor for the total population sample while location explained change in contractor under two contract pools and change in officials under one contract pool. The remaining two self-interest model factors explained change in contractor for the total population sample and explained change in contractor for the majority of contract pools.

Even though the influence of the self-interest factors was found under at least one contracting circumstance, the influence of the self-interest factors were neither consistent nor equally strong under any particular contracting circumstances. Therefore, we conclude that the exercise of political influence in the agency's contract decisions is selective rather than systematic and is contingent on the set of contracting circumstances.

The dominance of the policy model factors and their ability to explain change in contractor is demonstrated by this study. The policy model factors represent a consistent and near systematic influence across all of the agency's contract decisions. All five policy model factors explained change in contractor under the majority of contracting situations with the

financial aspects of the agency's contract decisions influencing only four of the eight different contracting circumstances and the low-bid position influencing the agency's contract decisions under six of the eight contract circumstances. The remaining three factors explained the agency's contract decisions under seven of the eight contract circumstances. However, the economic factors in the seven pools still finds the power and advantage of the incumbent: incumbent contractors generally win consecutive high dollar-value contract by slightly increasing prices while facing little competition and enjoying price increase.

Table XXXVIII provides an overview of the influence of the policy and self-interest model factors on the agency's contract decisions. The overview illustrates that the total population doesn't represent the agency's contract decisions under all circumstances, the policy model offers the dominant explanation, and only Daley's regime failed to show any influence of the self-interest model. However, the pool analysis does illustrate the ability of the general research model to explain the agency's contract decisions under different contracting circumstances.

TABLE XXXVIII: OVERVIEW OF THE INFLUENCE OF THE POLICY AND SELF-INTEREST MODELS									
FACTORS	TOTAL SAMPLE	BYRNE'S REGIME	WASHING-TON'S REGIME	SAWYER'S REGIME	DALEY'S REGIME	CHICAGO-BASED FIRMS	DBE FIRM	SMALL BUSI-NESSES	NO. OF SIGN. EXPLANATIONS
POLICY MODEL FACTORS									
FINANCIAL	yes		yes	yes				yes	4
LOW-BID	yes	yes	yes	yes	yes	yes		yes	6
PRICE CHANGE	yes	yes	yes	yes	yes	yes		yes	7
COMPETITION	yes		yes	yes	yes	yes	yes	yes	7
PRICING TACTIC	yes	yes	yes				yes	yes	6
SELF-INTEREST FACTORS									
REGIME		yes				yes	yes	yes	4
WARD LOCATION		yes	yes						2
ACTORS							yes		1
REVIEW TIME	yes	yes	yes	yes					4
JUSTIFICATION	yes		yes	yes		yes	yes	yes	6

"yes" means that at least one variable used to measure the particular factor explained change in contractor within the selection of contracts for each pool and the total sample.

The dominance of the policy model factors supports the public's faith that procurement regulation is effective in influencing contract decisions, and that low-cost goods and services are obtained when competition is maximized. The less consistent, non-systematic, and weaker influence of the self-interest model factors also supports the public's greatest fear that political influence does effect government contracting decisions. In the case of the agency under study, the political influence may be a variant from the agency's normal tendency to seek low-cost inputs. Political influence may simply cause tension within the agency that tends to achieve its economic goals when left alone. However the tension is created by the factors of the self-interest model trying to influence the agency's tendency to seek low-cost inputs rather than vice versa. Under some contracting circumstances, such as during Byrne's term, the tension between the models is greater, while under other circumstances, such as during Daley's term, the tension was not found.

1. Mayoral terms

Different economic and political factors explained the agency's contract decisions during each mayoral term. The logit analysis for each mayoral term explains a significant percentage of change in contractor. The R^2 values show that the logit analyses for Byrne and Daley's term explains approximately 70% of the variance in change in contractor occurring during their

mayoral terms while the logit analyses for Washington and Sawyer explains 45% and 44%, respectively.

a. Byrne's term

During Byrne's term, political variables offered the compelling explanation for change in contractor. Five self-interest model variables explained change in contractor while the economic variables offered the weakest explanation for change in contractor among the four mayors. Four policy model variables explained change in contractor. Unlike the other six contract pools and the total sample, more political variables explained change in contractor than economic variables during Byrne's terms. From this finding, we can infer Byrne exerted the greatest political influence over the agency of the four mayors.

The strength of the political influence during Byrne's regime is measured through three self-interest model factors: regime, political value of location, and three measures of administrative review.

The incumbent's probability of winning a subsequent annual-order increased as Byrne's regime increased its power and increased if the firm was located in a ward whose alderman voted with Byrne. Incumbents were also given favorable administrative reviews. Byrne's term is the only regime where the first three phases of the agency contracting process explained change in

contractor. Incumbent contractors were more likely to win a subsequent annual-order contract when the pre-bid and bid solicitation period was brief and when the purchasing agent gave a quick review and approval of the contract recommendation. Interestingly, the opposite is true of the contract officer. The incumbent's probability of winning increased when the contract officer took more time to review and recommend a contract award. If the incumbent contractor is politically preferred and is other-than-low-bidder, time consuming review and the related documentation would be required by the contract officer in order to by-pass the low overall bidder, or the contract officer's long review time could indicate either an administrative inefficiency or a conflict between the contract officer and the purchasing agent regarding the basis for contract recommendation. However, the challenger, or a new firm, got a quick review by the contract officer. Interestingly, the contract officer is found to explain change in contractor under only two circumstances, Byrne and Washington's terms, and their influence is opposite.

Incumbent firms located in wards whose alderman voted with Byrne were more successful at winning consecutive annual-order contracts. This finding supports the inference that distributive politics was operative during Byrne's term due to the evidence of geographic targeting based on the voting behavior of the ward's alderman. The finding is congruent with the political circumstances during Byrne's term. Byrne needed to build her own

group of political supporters independent of the loyal supporters of Richard J. Daley whose political influence extended for nearly three decades. Consequently, it is reasonable to expect Byrne to seek political supporters among those firms located in wards whose alderman voted with her by influencing the agency's contract decisions to favor those firms.

Three policy model factors explained change in contractor. Low-bid position and price change are the same as the total population sample and describe an incumbent who wins by a large percent difference in bid prices and wins with an increase in contract prices. The third factor, contractor's pricing tactics, shows that successful incumbents offered percent price discount for early payment of invoices which was not found among the total sample, but was found during Daley's term.

Competition did not explain change in contractor during Byrne's regime. Generally, relationships that are not-significant are not worthy of further discussion. However, the failure of competition to explain the agency's contract decisions during Byrne's term is an abnormality in this study. At least one measure of competition explained change in contractor under all other pools while none of the three measures of competition are significant during Byrne's regime. The failure of these three measures to explain change in contractor during Byrne's term causes us to question whether the agency was seeking low-

cost inputs and whether competition among firms was discouraged during the Byrne's regime.

Three inferences can be drawn from these findings: First, the competitive spirit for the agency's contracts was diminished more during Byrne's term than during any other contracting circumstances. Second, Byrne was more likely than any other mayor to use her political power to influence the agency contract decisions. Third, cozy relationships were formed during Byrne's term because both the politician and bureaucrat influenced contract decisions while incumbents enjoyed extra benefits of less market competition and price increases.

b. Washington's term

Washington's term revealed that location of the firm influenced the agency's contract decisions. This finding is expected because Washington exercised considerable influence to change the political landscape of Chicago through efforts to organize a Rainbow Coalition, to appoint new department heads, and to reorganize many city services, and Washington, like Byrne, needed to find a new mix of political supporters in Chicago in order to survive.

Interestingly, the only administrative review time that explained change in contractor under Washington's regime was the days for the contract officer's review and the relationship is

opposite than that found during Byrne's regime: the incumbent was more successful when the contract officer took less time to review the bid responses and recommend a contractor. Two explanations may explain the contract officer's behavior: (a) Washington saw an inefficiency in the agency's contract administration and corrected it, or (b) the contract officer gave a quick and favorable review of the incumbent because incumbents transferred their loyalty from Byrne to Washington since both mayors were opposed to a Daley regime. However, DBE firms still had to win as challengers, while non-DBE firms won as incumbents. Minority-owned businesses were given the same treatment during Washington's regime as under all other contracting circumstances where the DBE policy administration explained change in contractor.

One economic factor suggests that Washington was supported by firms who had supported Byrne. Sales to the agency explained the agency's contract decisions only during Washington's mayoral regime. During Washington's regime, incumbent contractors with high annual sales, sales earned during Byrne's regime, were more successful at winning subsequent annual-order contracts. This is the second finding to suggest that incumbents who were successful during Byrne's regime switched allegiance from Byrne to Washington, i.e., Byrne identified and rewarded a new set of successful incumbent contractors who would give her political support and Washington managed to keep rewarding those successful

incumbents with consecutive annual-order contracts via a quick administrative review by the contract officer.

c. Sawyer's term

DBE policy administration and the influence of executive staff and president are the only two political influences found during Sawyer's term. Sawyer's term was the only contracting circumstance where the executive staff and president influenced change in contractor and DBE firms were treated the same under Sawyer as found under four other contracting circumstances. Executive staff and president's influence could be due to Sawyer's sudden rise to power and brief political regime thereby limiting his ability to influence the agency's contracting process. Facing such a short time frame, Sawyer's only hope was to influence the agency's executive staff and president who would be the more susceptible to his influence, because his brother was one of the agency's administrative executives, and , as mayor, Sawyer had direct access to the agency's president and other executive managers.

A review of the economic factors show that Sawyer's term is consistent with the expected relationship revealed by the total population sample. Four of the five policy model factors explain change in contractor. The contractor's pricing tactics is the only factor that did not explain change in contractor during Sawyer's term. The dominance of the policy model explanation

during Sawyer's term reinforces the inference that procurement policy will control the agency's contract decisions when political influence is not present, and re-emphasizes the importance of administrative discretion and bureaucratic decision rules in determining the final contract award decisions.

d. Daley's term

No self-interest model factors explained change in contractor during Daley's term, and this finding suggests that Daley did not exercise any political influence in the agency's contracting process during the early years of his first term in office.

Three policy model factors explained change in contractor during Daley's regime: price and CPI change, competition, and contractor's pricing tactics. The measures are consistent with the findings of the total population sample except for consumer price index.

The consumer price index explained the agency's contract decisions only during Daley's regime. This finding suggests that the contractor's price during Daley's regime may be limited by the prevailing market conditions. The statistical analysis shows that incumbent contractors tended to lose a subsequent annual-order contracts during higher rates of inflation and incumbents tended to win subsequent annual-order contracts inflationary

pressure is minimal. These findings suggest that there was some market control and price competition during Daley's regime.

2. Private firms

Three principal findings are revealed by the self-interest model factors. First, the success of small firms, DBE firms, and Chicago-based firms all depended on the presences of a political regime. Due to the coding of the regime variable[75], a negative relationship means incumbents were more successful winning a consecutive annual-order contract during the presence of a regime as defined by Chart V on page 66.

The second principal finding is the influence of staff cohesiveness under the pool of DBE firms. Staff cohesiveness for the pool of DBE firms is the only pool where change of elected and appointed officials explained change in contractor and the relationship is opposite than hypothesized. Due to the coding of staff cohesiveness[76], DBE incumbents are more likely to win a consecutive annual-order contract when all the political and bureaucratic actors change. This finding opposes the hypothesized relationship which assumed that the incumbent's success, regardless of whether they are DBE or non-DBEs, would be maximum when cohesiveness is the greatest.

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[75]Coding for the presence of a political regime: 0=presence of political regime and 1=political regime not present.

[76]Coding for staff cohesiveness: 1=cohesiveness where none of the actors change and 8=no cohesiveness where all the actors changed.

Staff influence over the awarding of contracts to a DBE firm is expected because the DBE participation program[77] is an established public policy supported by the federal government and the agency. In fact, the agency increased its DBE participation goal to 30% of all contracts from the federal mandated requirement of 10%. The 200% increase in the DBE goal can be explained by the large minority population in Chicago who are also the constituency served by the transit agency. Consequently, politicians and bureaucrats are expected to influence the agency's contract decisions in order to show their support for DBE firms, but the greatest influence was found during times of least cohesiveness among the agency's staff. Evidently, the DBE department[78] could exercise the greatest influence when the agency was in transition between political regimes but once the new staff was seated, the DBE department lost some of its ability to obtain favorable treatment for DBE

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[77]The term "DBE firm" means a "firm that is owned by an economically disadvantaged person." The DBE firm participation goal established by the federal government is 10%. However, the agency increased their goal to 30% based on an assessment of the disparity existing within the agency's market area. Consequently, it is reasonable to expect local politicians or the agency's bureaucrats to promote DBE firm participation.

[78]The agency has a fully staffed administrative department to oversee the implementation of the DBE participation program. The principal responsibility of the DBE compliance officers is to oversee the implementation of the DBE participation program in order to ensure its success. As insiders to the organization, the DBE compliance officers are in the best position to influence the agency's contract decisions. No influence was found.

The administrators ought to be strongly motivated to influence the agency's contract decisions, because success of the DBE program achieves both policy model and self-interest model goals. When DBE participation is maximized, a policy goal is achieved by the agency, and simultaneously the goals of the self-interest model are also achieved, because success in achieving the social goals ought to ensure job security and stable or increased budgets for the DBE Compliance Department. However, no influence was found.

firms. Also, DBE firms continued to struggle to win a subsequent annual-order contract as an incumbent contractor regardless of whether they were located in Chicago or a small firm.

The third principal finding that explained change in contractor among the pools of private firms is contract justification factor. DBE firms and Chicago-based firms are the only two types of contracting circumstances where the remarks length explained change in contractor, and a brief and simple remarks section benefits incumbents under both circumstances. This finding infers that contract awards to these firms were accepted by the politicians and bureaucrats with little or no conflict.

3. Conclusion

The pool analysis of the agency's contract decisions supports the general conclusion that the policy model provides the dominant explanation for change in contractor and that distributive policies are used selectively rather than systematically to influence the agency's contract decisions. The next section, a micro-analysis of mayoral influence, will critically examine the influence of the political factors as a function of mayoral term. This micro-analysis critically examines the ability of the political factors to explain change in contract through the creation of indicator variables for each

mayoral term and an interactive variable to represent the political factors.

D. A Micro-analysis of Mayoral Influence in the Agency's Contracting Process

1. Introduction to micro-analysis

This micro-analysis tests for the influence of change in mayor[79] on change in contractor. The contract pool analysis, Table XXXVII, reports the influence of different mayors on change in contractor by selecting contracting events that occurred during the mayor's term in office. The sample of contracts selected for each pool is valid for comparison of the different mayors, but the sample selection criteria produced small contract pools for Byrne and Daley's terms and the small samples are not able to provide statistically significant and reliable results. This micro-analysis increases the sample size through the creation of indicator variables to measure change in mayors. The indicator variables use the total sample data set to compare one mayor with the average value of the other three mayors. The indicator variables and larger sample provide a more reliable and statistically significant comparison, isolating the influence of

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[79]Change in mayor is measured by two variables: mayoral term and mayoral transition variables. The mayoral term variable includes four variables to measure the term of each of the four mayors and the mayoral transition variable includes two variables: one variable measures the transition between political regimes and the second mayoral transition variables measures the transition in the mayor's political influence at the agency by assuming a 3-month lag between election to office and influence in the agency's contracting process.

one mayor and comparing it with the average influence of the other three mayors.

Policy Model Factors. This study provides ample support for the acceptance of the policy model's ability to explain change in contractor at the CTA. The pool analysis in Table XXXVII shows that price and CPI change factor explains change in contractor during all four mayoral terms; low-bid position factor, competition factor, and contractor's pricing tactics factor explain change in contractor during three of the four mayoral terms; and financial aspects factor explains change in contractor during two mayoral terms. These findings support the hypothesis that the policy model consistently explains contracting success at the CTA. These findings are in agreement with the findings reported in the general research model for the total sample as reported in Table XXVIII, Chapter VI, where all five of the five policy model factors explained change in contractor.

Self-Interest Model Factors. On the other hand, the self-interest model provided mixed results when explaining change in contractor at the CTA. The pool analysis findings reported in Table XXXVII show that several of the political and administrative factors explained change in contractor, but not during all mayoral terms. The pool analysis is inconclusive in explaining the influence of the self-interest model factors during the different mayoral terms. This micro-analysis re-tests

the ability of the self-interest model to explain change in contractor but as a function of change in mayor. The following table shows the eleven political and administrative variables that will be used to re-test the self-interest model. Eight of the eleven variables explained change in contractor under at least two different contracting circumstances. The three cohesiveness[80] variables did not explain change in contractor for any mayoral terms, the basic regression, or when the self-interest model was tested separately. However, the cohesiveness measures are included in this micro-analysis because they are intuitively attractive measures of political relationships and they remain the only measure of change in actors.

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[80]One cohesiveness variable is significant, but for only the DBE firm pool.

TABLE XXXIX: THE ELEVEN POLITICAL AND ADMINISTRATIVE VARIABLES USED FOR THE MICRO-ANALYSIS OF MAYORAL INFLUENCE								
FACTOR	VARIABLE NAME	VAR. NO.	RESULTS OF THE LOGIT ANALYSIS FOR SIX DIFFERENT CONTRACTING CIRCUMSTANCES					
			GENERAL MODEL TABLE XXVIII		POOLS ANALYSIS TABLE XXXVII			
			SIM[81] ONLY	ALL VARS	BYRNE TERM	WASH. TERM	SAWYER TERM	DALEY TERM
REGIME	POWER OF A POLITICAL REGIME	V58						
LOCATION	FIRM'S LOCATION BASED ON THE 1990 CENSUS	V5						
CHANGE IN OFFICIALS	POLITICAL COHESIVENESS	V56						
	PURCHASING COHESIVENESS	V57						
	MANAGEMENT STAFF COHESIVENESS	V63						
ADMINISTRATIVE REVIEW	DAYS FOR PRE-BID AND BID SOLICITATION	TDAYS1						
	DAYS FOR CONTRACT OFFICER REVIEW	TDAYS2						
	DAYS FOR PURCHASING AGENT'S REVIEW	TDAYS3						
	DAYS FOR EXECUTIVE STAFF'S REVIEW	TDAYS4						
	DAYS FOR CONTRACT EXECUTION	TDAYS5						
CONTRACT JUSTIFICATION	DBE POLICY ADMINISTRATION	V65						

Note: Shared areas indicate which variables are significant at 0.10 p-value or lower for the particular contracting circumstances.

[81] "SIM ONLY" means the logit analysis of the "Self-Interest Model" as reported in Table XXVIII.

2. Variable definition

Three indicator variables are used to measure the influence of change in mayor on change in contractor. I will call the three variables mayoral term, mayoral transition, and mayoral interactive. Following is the definition of the three indicator variables.

a. Mayoral term variables

Four values are used to measure mayoral terms. The variable for each mayor is binary and coded to give each mayor the value of 1 when the contract occurs during the particular mayor's term in office and a value of 0 during other times over the ten-year research period. Following is the table of values for the four variables created to measure the influence of change in mayor on change in contractor.

MAYORAL CHANGE VARIABLE	VALUE OF THE MAYORAL CHANGE VARIABLES			
	Byrne's Term	Washington's Term	Sawyer' Term	Daley's Term
BYRNE	1	0	0	0
WASHINGTON	0	1	0	0
SAWYER	0	0	1	0
DALEY	0	0	0	1

b. Mayoral transition[82] variables

Two values are used to measure mayoral transition[83]. One mayoral transition variable, which I will call Transition: Mayoral Regime, is based on the mayoral regimes as defined in Chart V, page 66, Chapter II. Chart V defines a mayoral regime as the time period when the mayor has his or her chosen candidate serving as chairman and president of the Chicago Transit Authority, and the absence of a regime is when the mayor, chairman, or president change. Chart V is repeated on page 246 and a column is added to show the variable's values during the presence and absence of a regime.

The second mayoral transition variable, which I will call Transition: Political Influence, uses the election of a new mayor as the basis for estimating periods of transition or no transition in the mayor's ability to influence change in contractor. The second mayoral transition variable assumes a 3-month lag between the mayor's election to office and the mayor's ability to influence change in contractor at the agency regardless of who is currently serving as chairman and president. The second variable is explained on page 247. The transition, or

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[82]Transition is a dummy variable that measures changes in political power that are likely to create periods of consensus and conflict among the political actors in the city of Chicago. A period of transition in political power is likely to be a period of conflict among political actors and change in contractor is likely to occur. Whereas the period of no transition in political power is likely to be a period of consensus and change in contractor is not likely to occur.

[83]The transition in political power when the mayors change.

political influence of the mayor, is assumed to begin three months after the mayor is elected to office, and the mayor's influence to cause a change in contractor is assumed to continue for a period of twelve months. The second mayoral transition variable is based on two assumptions: First, the new mayor will need three months in office before he or she can influence change in contractor at the CTA, because the CTA is not under the direct control of the mayor. The new mayor must first concentrate his or her effort to control city government before trying to influence any other agency such as the CTA. This micro-analysis of mayoral influence assumes that the new mayor will have both the time and/or capability to influence the contracting process of other agencies such as the CTA. Second, evidence of the mayor's influence to cause a change in contractor is most likely found during a twelve-month period, because the CTA contracts under study are annual-orders and all annual-order contracts will be renewed within that period. The time-line of the second transition variable, transition: political influence, is shown on page 254 along with the variable's values.

The first transition variable covers eight transition periods, and the second transition variable covers seven transition periods.

CHART V: MODELING CONFLICT AND CONSENSUS DURING THE RESEARCH PERIOD

	MAYOR	CHAIRMAN	PRESIDENT	POLITICAL STAGE	PERIOD	DATES	VALUE
1981	BYRNE	BARNES	SCHUSTER			5/21/82	1
1982	BYRNE	BARNES CARDILLI	SCHUSTER FORD	**BYRNE'S REGIME**	**CONSENSUS**		0
1983	BYRNE WASH.	CARDILLI	FORD	*TRANSITION PERIOD #1*	CONFLICT	4/15/83 – 2/1/86	1
1984	WASH	CARDILLI	FORD				
1985	WASH	CARDILLI	FORD				
1986	WASH	CARDILLI CLARK	FORD PAASWELL	**WASHINGTON'S REGIME**	**CONSENSUS**		0
1987	WASH SAWYER	CLARK	PAASWELL	*TRANSITION PERIOD #2*	CONFLICT	3/15/87 – 6/15/88	1
1988	SAWYER	CLARK BURRUS	PAASWELL				
1989	SAWYER	BURRUS	PAASWELL FORD	**SAWYER'S REGIME**	**CONSENSUS**		0
1990	SAWYER DALEY	BURRUS	FORD SAVAGE	*TRANSITION PERIOD #3*	CONFLICT	4/15/90 – 2/1/92	1
1991	DALEY	BURRUS	SAVAGE				
1992	DALEY	BURRUS	SAVAGE BELCASTER				
1993	DALEY	BURRUS	BELCASTER	**DALEY'S REGIME**	**CONSENSUS**		0

Note: see Appendix C for definition of period of consensus and period of conflict.

TRANSITION: POLITICAL INFLUENCE.

		VARIABLE VALUE
1981 TO 4/14/83 -	NO TRANSITION IN POLITICAL POWER AT THE AGENCY Mayor Byrne in office.	
APRIL 15, 1983 -	MAYOR WASHINGTON ELECTED TO OFFICE	0
	3-MONTH LAG PERIOD	
JULY 15, 1983 -	START OF TRANSITION AT THE AGENCY Mayor Washington begins to influence the agency's contracting process. TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors face stiff competition from challenging firms who are political allies of the mayor.	1
JULY 15, 1984 -	END OF TRANSITION PERIOD AT THE AGENCY Completed agency's cycle of annual order renewals. NO TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors generally win due to their economic power or political influence.	0
NOV. 26, 1987 - DEC. 2, 1987 -	MAYOR WASHINGTON DIES WHILE IN OFFICE; EUGENE SAWYER ELECTED ACTING MAYOR BY COUNCIL.	
	3-MONTH LAG PERIOD	
FEB 26, 1988 -	START OF TRANSITION PERIOD AT THE AGENCY Mayor Sawyer begins to influence the agency's contracting process. TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors face stiff competition from challenging firms who are political allies of the mayor.	1
FEB. 26, 1989 -	END OF TRANSITION PERIOD AT THE AGENCY Completed agency's cycle of annual order renewals. NO TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors generally win due to their economic power or political influence.	0
APRIL 15, 1989 -	DALEY WINS MAYORAL ELECTION	
	3-MONTH LAG PERIOD	
JULY 15, 1989 -	START OF TRANSITION PERIOD AT THE AGENCY Mayor Daley begins to influence the agency's contracting process. TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors face stiff competition from challenging firms who are political allies of the mayor.	1
JULY 15, 1990 -	END OF TRANSITION PERIOD AT THE AGENCY Completed agency's cycle of annual order renewals NO TRANSITION IN POLITICAL POWER AT THE AGENCY Incumbent contractors generally win due to their economic power or political influence.	0

c. Mayoral interactive variables

Eleven variables are used to measure the ability of the self-interest model to explain change in contractor during each mayoral term and mayoral transition. The interactive variables are created by combining the joint effect of mayoral term and mayoral transition variables with each of the previously mentioned eleven political and administrative variables used to measure all self-interest model factors. Interactive variables allow us to compare the probability of change in contractor caused by the change in one mayor with the average probability of change in contractor occurring during the other three mayoral terms. This comparison tells us how one mayor may have influenced change in contractor differently than the other three mayors. The influence of one mayor can be determined because the interactive variable tells us whether the particular political or administrative variable is more or less probable to cause a change in contractor during a particular mayor's term than during the terms of the other three mayors.

3. Results of the logit regression analysis

a. Mayoral terms micro-analysis results

Tables XXXIX-A, -B, -C, and -D report the results of the logit analysis using the mayoral term variables with their interactive variables. All regressions include 579 contracting events.

TABLE XXXXIX-A INFLUENCE OF BYRNE'S TERM ON CHANGE IN CONTRACTOR WHEN COMPARED WITH THE AVERAGE VALUES OF THE OTHER THREE MAYORAL TERMS

		MAYORAL TERMS	
FACTORS	VARIABLE NAME (Variable Number)	BYRNE'S TERM	AVERAGE OF OTHER THREE MAYORS
MAYORAL TERM		-9.3717 .0766	-16.4100 .0468
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	2.7278 .1979	-0.0487 .9172
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	0.4976 .0489	-0.00291 .9701
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	-0.6659 .0114	0.00842 .8734
	[PURCHASING COHESIVENESS] (INTERV57)	-0.0341 .8366	-0.0100 .8631
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	0.0778 .8395	0.00909 .8625
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	-0.0122 .1241	-0.00164 .1106
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	0.0754 .0278	-0.00267 .2069
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	-0.0620 .0469	-0.00157 .5933
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	0.0333 .4581	0.00235 .4984
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	-0.00481 .2045	0.00314 .1778
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	-0.9510 .5039	-1.0899 .0005

TABLE XXXXIX-B[84] INFLUENCE OF WASHINGTON'S TERM ON CHANGE IN CONTRACTOR WHEN COMPARED WITH THE AVERAGE VALUES OF THE OTHER THREE MAYORAL TERMS

		MAYORAL TERMS	
FACTORS	VARIABLE NAME (Variable Number)	WASHINGTON'S TERM	AVERAGE OF OTHER THREE MAYORS
MAYORAL TERM		-1.5787 .5997	-12.6313 0.1096
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	1.0094 .1915	-0.3235 .5327
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	0.0283 .8437	0.0458 .6141
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	-0.0114 .9186	-0.0398 .5194
	[PURCHASING COHESIVENESS] (INTERV57)	0.1911 .2795	-0.0580 .3503
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	-0.1009 .3928	0.0766 .2777
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	-0.00006 .9763	-0.00220 .0647
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	-0.00537 .1521	0.00162 .4626
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	0.00413 .4926	-0.00571 .1165
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	-0.00638 .4571	0.00702 .1082
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	0.00585 .1462	-0.00084 .5844
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	-0.1261 .8634	-1.1818 .0007

[84]The mayoral term variables and interactive variables are analyzed in the same multivariate regression model used in Chapter VI. The statistical results of the full regression model are not included in these tables because this analysis concerns only the effect of Change in mayor as measured by the self-interest model, and the change in the general model variables were negligible and would not cause a change in the conclusions stated in Chapter VI. See Appendix O for a SAS printout of the complete regression equation.

TABLE XXXIX-C INFLUENCE OF SAWYER'S TERM ON CHANGE IN CONTRACTOR COMPARED THE AVERAGE INFLUENCE FOUND UNDER THE OTHER THREE MAYORAL TERMS

		MAYORAL TERMS	
FACTORS	VARIABLE NAME (Variable Number)	SAWYER'S TERM	AVERAGE OF OTHER THREE MAYORS
MAYORAL TERM		6.2536 .0505	-14.4601 0.0724
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	-1.5113 .1005	0.7521 .1410
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	-0.3075 .0478	0.1260 .1603
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	0.1553 .2478	-0.0592 .3182
	[PURCHASING COHESIVENESS] (INTERV57)	-0.0967 .4388	0.0171 .7850
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	0.1755 .1482	-0.0517 .4039
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	-0.00079 .7087	-0.00203 .0829
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	-0.00264 .5588	0.000325 .8805
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	0.00740 .2205	-0.00682 .0736
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	0.0159 .3813	0.00283 .6056
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	0.00202 .6341	-0.00024 .7719
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	-0.0138 .9821	-1.0226 .0097

TABLE XXXIX-D INFLUENCE OF DALEY'S TERM ON CHANGE IN CONTRACTOR COMPARED THE AVERAGE INFLUENCE FOUND UNDER THE OTHER THREE MAYORAL TERMS

		MAYORAL TERMS	
FACTORS	VARIABLE NAME (Variable Number)	DALEY'S TERM	AVERAGE OF OTHER THREE MAYORS
MAYORAL TERM		-1.1879 .7869	-12.1638 .1168
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	-0.6905 .5653	0.1064 .8396
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	-0.0174 .9323	0.0874 .2650
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	0.3048 .2649	-0.0185 .7512
	[PURCHASING COHESIVENESS] (INTERV57)	-0.3472 .0298	0.0348 .5122
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	0.0137 .9457	-0.00991 .8719
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	0.00335 .1215	-0.00252 .0288
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	-0.0001 .9876	-0.00065 .7393
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	-0.0248 .0797	-0.00230 .4455
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	0.00601 .6662	0.00569 .2177
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	0.0106 .2815	-0.00028 .7287
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	0.2341 .7425	-1.3318 .0002

b. Mayoral transition micro-analysis results

Table XXXX-A reports the results of the logit analysis using the transition variables with their interactive terms. Both samples include 579 contracting events.

TABLE XXXX-A INFLUENCE OF TRANSITION: MAYORAL REGIME ON CHANGE IN CONTRACTOR COMPARED THE AVERAGE INFLUENCE FOUND UNDER THE OTHER THREE MAYORAL TERMS

		MAYORAL TRANSITION	
FACTORS	VARIABLE NAME (Variable Number)	TRANSITION : MAYORAL REGIME	AVERAGE OF OTHER THREE MAYORS
MAYORAL TERM		-6.6252 .0339	-10.4303 .1910
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	0.0855 .9333	-0.2232 .7989
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	0.2804 .0516	-0.0962 .3974
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	0.0318 .7751	-0.0445 .6280
	[PURCHASING COHESIVENESS] (INTERV57)	0.1131 .3115	-0.0753 .4322
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	0.00863 .9463	-0.00139 .9901
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	0.00203 .3126	-0.00316 .0426
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	-0.00071 .8560	0.000016 .9959
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	-0.00489 .4070	-0.00119 .7834
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	-0.0348 .0435	0.0392 .0174
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	-0.00106 .7501	0.00075 .8120
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	0.3196 .5895	-1.2829 .0049

TABLE XXXX-B	INFLUENCE OF TRANSITION IN POLITICAL INFLUENCE ON CHANGE IN CONTRACTOR COMPARED THE AVERAGE INFLUENCE FOUND UNDER THE OTHER THREE MAYORAL TERMS		
		MAYORAL TRANSITION	
FACTORS	VARIABLE NAME (Variable Number)	TRANSITION: POLITICAL INFLUENCE	AVERAGE VALUE REGARDLESS OF TRANSITION
MAYORAL TERM		1.4174 .6440	-13.0265 .1002
SELF-INTEREST MODEL			
REGIME	[POWER OF A POLITICAL REGIME] (INTERV58)	-0.5507 .5808	0.6623 .2088
POLITICAL VALUE OF LOCATION FACTORS	[FIRM'S LOCATION BASED ON THE 1990 CENSUS] (INTERV5)	-0.0432 .7671	0.0615 .5060
CHANGE OF ELECTED AND APPOINTED OFFICIALS	[POLITICAL COHESIVENESS] (INTERV56)	0.00366 .9747	-0.0151 .7983
	[PURCHASING COHESIVENESS] (INTERV57)	-0.1306 .2809	0.0200 .7721
	[MANAGEMENT STAFF COHESIVENESS] (INTERV63)	0.1688 .1373	-0.1006 .1248
ADMINISTRATIVE REVIEW TIME FACTOR (measured in days)	[DAYS FOR PRE-BID AND BID SOLICITATION] (INTDAYS1)	-0.00256 .2392	-0.00143 .2098
	[DAYS FOR CONTRACT OFFICER REVIEW] (INTDAYS2)	0.00212 .5908	-0.00104 .6462
	[DAYS FOR PURCHASING AGENT'S REVIEW] (INTDAYS3)	0.00514 .3762	-0.00594 .1259
	[DAYS FOR EXECUTIVE STAFF AND PRESIDENT'S REVIEW] (INTDAYS4)	0.0363 .0510	-0.00074 .9030
	[DAYS FOR CONTRACT EXECUTION] (INTDAYS5)	-0.00139 .7228	-0.00024 .7545
CONTRACT JUSTIFICATION FACTOR	[DBE POLICY ADMINISTRATION] (INTERV65)	0.0902 .8799	-1.2391 .0021

4. Discussion of results

Three findings are of general interest: (1) Political variables still provided the most compelling explanation for change in contractor during Byrne's term, (2) no influence was exercised by the chairman under any contracting circumstance, and (3) the implementation of the DBE policy is consistently enforced across all mayoral terms or mayoral transitions rather than selected enforced during only one mayoral term. Following is a review of the significant finding for mayoral change and mayoral transition.

a. Mayoral terms

Byrne's Term. The probability of change in contractor caused by self-interest model factors is more likely during Byrne's term than the average probability of change during the other three mayoral terms. Byrne's term and four political and administrative variables are of substantive importance during her term and are likely to be the cause of change in contractor:

(1) Byrne's Term. A negative coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract decreased during Byrne's term. This finding is expected because the incumbent contractors were most likely friendly towards Richard J. Daley's regime, Byrne's political adversaries.

(2) Firm's ward locations. A positive coefficient indicates that incumbents located in wards whose alderman votes with Byrne are more likely to win consecutive annual-order contracts. This finding is as hypothesized.

(3) Political cohesiveness. A negative coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract decreases as political actors change. This means that challengers were more likely to win contracts when Byrne was appointing her people to office. This relationship is as originally hypothesized and is consistent with the first finding where incumbents were more likely to lose the consecutive annual-order during Byrne's term.

(4) Two administrative variables used to measure contract review time:

   (a) days for contract officer review. A positive coefficient indicates that the incumbent's probability of winning a contract increases as the time the contract officer takes to review the bids and make a contract recommendation increases. Conversely, challengers were more likely to win when the contract officer gave a quick review and approval of the challenger's bid.

   (b) days for purchasing agent's review. A negative coefficient indicates that the incumbent's probability of winning a contract decreases as the time the

purchasing agent takes to review and approve the contract recommendation increases. Conversely, challengers were more likely to win when the purchasing agent took an extended period to review and approve the contract recommendation.

A comparison of the contract officer and purchasing agent indicates that a conflict existed between these two purchasing professionals during Byrne's term. The contract officer appeared to extensively critique the incumbent's bid whereas the purchasing agent extensively critiqued the challenger's bid. This conflict in review time indicates that an internal check-and-balance system exists with the agency's purchasing department, and as Cathy Johnson alleges, the public is the principal beneficiary when conflict exists among public officials.

Washington's Term. The probability of change in contractor during Washington's term showed that no political or administrative variables were of substantive importance in explaining change in contractor. This finding is opposed to the finding using the pool analysis which found that ward location, the contract officer's review time, and the DBE Policy Administration all explained change in contractor. The contradiction between the pool analysis and micro-analysis

findings creates doubt regarding Mayor Washington's ability to influence the agency's contract decisions.

Sawyer's Term. The probability of change in contractor is more likely to occur during Sawyer's term than the probability of change during Washington and Daley's terms, and Sawyer's influence on change in contractor is the opposite of the influence found during Byrne's term. Also, the political value of the firm's ward location during Sawyer's term is of substantive importance to change in contractor, but in the opposite direction than found during Byrne's term.

A positive coefficient for the mayoral term variable infers that incumbents were more likely to win during Sawyer's term, and a negative coefficient infers that challengers were more likely to win during Byrne's term. This contrast suggests that each mayor used the agency's contracts to help achieve their electoral ends. As discussed in the pool analysis, Byrne needed to find new political allies after winning office by challenging the Daley Machine which held office for over twenty-five years. Hence, the success of the challenger who would be more likely to support Byrne. On the other hand, Sawyer won the mayor's office by a majority vote of the city council, and that majority vote represented an anti-Washington coalition who would most likely support Richard M. Daley in the next mayoral election. If Sawyer wanted to run for the mayor's office, he would have to mend

fences with Washington supporters. Therefore, we would expect incumbents from Washington's term to also be successful during Sawyer's term.

The firm's location also illustrates the contrast between Byrne and Sawyer's electoral goals. The negative coefficient during Sawyer's term infers that incumbents located in wards that voted against him or outside the city were more likely to win a consecutive annual-order contract. Whereas, a positive coefficient during Byrne's term infers that incumbents located in wards that voted with her were more likely to win a consecutive annual-order contract.

These findings are consistent with the results reported in Table XXXVIII; Byrne favored challenging firms and incumbent firms located in wards whose aldermen voted with her, while Sawyer favored incumbent contractors and firms located in wards whose aldermen voted against him. The reasoning: Byrne faced political challenges from the Daley Machine that had occupied the mayor's office for over twenty-five years. Consequently, Byrne needed to find new political allies and could not rely on the incumbent contractors at the agency unless they were located in wards whose aldermen supported her.

Sawyer, who was elected to office by a pro-Daley faction of the city council, needed to win support of the pro-Washington

aldermen who had voted against him in order to be a viable candidate for mayor in the 1989 primary election. Consequently, he would reach out to incumbent contractors successful during Washington's term and favor firms located in the wards whose aldermen voted against him, because Sawyer did not believe the pro-Daley forces would support him for mayor.

Power of the political regime modifies the relationships explained above. The negative coefficient infers that incumbents are more likely to lose a consecutive annual-order contract during the early part of Sawyer's term, but incumbents are more likely to win a consecutive annual-order contract during the last part of Sawyer's term[85]. This finding infers that Sawyer may have searched for allies on both sides of the fence during his brief mayoral term, looking for allies from both the pro-Washington and pro-Daley camps.

Daley's Term. The probability of change in contractor during Daley's term shows that two political and administrative variables are of substantive importance and are likely to be the cause of change in contractor during Daley's term:

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[85]This variable assumes that power of a political regime approximates a normal distribution where political power is increasing during the early part of a mayor's term and decreasing during the last part of a mayor's term. See page 130. Consequently, a negative coefficient means that there is a negative relationship during the early part of the mayor's term and incumbents are likely to lose a consecutive annual-order and a positive relationship during the last part of the mayor's term and incumbents are likely to win a consecutive annual-order contract.

(1) Purchasing cohesiveness. A negative coefficient indicates that the incumbent's probability of winning a contract increases when all purchasing actors remain the same. This means that challengers were more likely to win an agency contract when there is change among the agency's purchasing officials.

(2) days for the purchasing agent's review. A negative coefficient indicates that the incumbent's probability of winning a contract increased when purchasing agent quickly reviewed and approved the contract recommendation increases. Whereas challengers were more likely to win a contract only after the purchasing agent scrutinized the contract award recommendation.

This is the only mayoral term where both measures of the agency's purchasing officials provided a substantive explanation for change in contractor. Two possibilities can explain these findings. First, Daley exercised direct influence over the bureaucrats who controlled the agency's contract decisions. Second, The purchasing officials influenced the agency's contract decisions, because Daley gave those bureaucrats more discretion, rather than less discretion, to make contract decisions. The first explanation would be supported if the mayoral term and political value of location variables also explained change in contractor. Significance of these two additional variables,

along with the purchasing official variables, would indicate the presence of cozy relationships. Due to the lack of significance among any of the other political and administrative variables, the second explanation is more plausible.

b. Mayoral transition

Two variables are used to measure the influence of the transition between the mayors as measured by regimes and assumptions regarding political influence.

Transition: Mayoral Regime. The transition between mayoral regimes as defined on Chart IV, Chapter II explains change in contractor. Incumbents generally win consecutive annual-order contracts during mayoral regimes and challengers generally win an annual-order contract during periods of transition between mayoral regimes. Two political and administrative variables are of substantive importance during the mayoral regime transitions and are likely to explain change in contractor.

(1) Firm's location based on the 1990 census. A positive coefficient indicates that an incumbent located in wards whose alderman votes with the mayor are likely to win consecutive annual-order contracts.

(2) Days for Executive Staff and President's Review. A negative coefficient indicates that the incumbents are likely to win a consecutive annual-order contract when

the executive staff and president give a quick review and approval of the contract recommendation.

Transition: Political Influence. The transition between mayoral regimes defined as a function of political influence did not explain change in contractor. Only one administrative variable is of substantive importance for this measure of mayoral transition: Days for Executive Staff and President's Review. A positive coefficient indicates that the incumbent's probability of winning a contract increases as the time the executive staff and president takes to review and approve the contract recommendation increases. This finding is opposite of the finding for the same variable when transition is measured by mayoral regimes. The reason for this difference cannot be explained within the scope of this study and further study of this relationship is needed.

5. Conclusion

The pool analysis and micro-analysis reveal three characteristics of the agency's contracting process:

(1) The policy model consistently explains change in contractor under all contracting circumstances. This finding infers that the agency does follow procurement policies and when the agency maximizes competition, the agency is likely to maximize the public good by obtaining low cost goods and services.

(2) The self-interest model did not provide a consistent explanation of change in contractor under all contracting circumstances. However, the self-interest model did provide some intuitively strong explanations under some contracting circumstances. This finding confirms the conclusion drawn in Chapter VI that stated political and bureaucratic influence in the agency's contracting process is selective rather than systematic.

(3) The elected and appointed officials do influence the agency's contract decisions. Under some circumstances, this study found that they were valueless implementors of stated policies while under other circumstances, they exercised their discretion to influence the final contract decision. The use of their discretion appeared to be a function of mayoral term and type of firm.

IX. CONCLUSION

This study investigated the distributive effects of a public agency's contract decisions. The research answers a basic question frequently asked about government's contracting process: "Who wins government contracts and why?" Distributive policies theory provided the research framework which included the measurement of both political factors and economic factors influencing the agency's contract decisions. The research findings answer many concerns of political scientists who are interested in the distributive effects of government's policy decisions. The study also answers many concerns of public officials and the general public who are interested in a more efficient and effective government purchasing system.

A. Who Wins Government Contracts and Why?

This study unmasked several disparities between incumbents and challengers as they compete for government contracts, and this study offers a partial answer to the question of who wins government contracts and why they win.

In searching for an explanation of who wins government contracts and why, an initial set of 48 economic, political, and administrative variables are used to explain change in contractor. These variables measured five policy model factors and five self-interest model factors. After eliminating 19 variables to reduce multicollinearity, a final set of 28

variables were used to search for an explanation of change in contractor under the general research model and in 13 other contracting circumstances through the use of a pool analysis and micro-analysis. Under the general research model, ten variables provided a significant explanation of change, and these ten variables explained approximately 35% of the variance in change in contractor. When the general research model was used to explain change in contractor under the 13 other contracting circumstances, 27 of the 28 variables explained change in contractor under at least one contracting circumstance. The general research model explained between 35% to 70% of the variance in change in contractor depending on the contracting circumstance.

The results of the general research model, pool analysis, and micro-analysis revealed different relationships that explained change in contractor. These relationships can be reduced to the following four explanations: firm size, price and market competition, administrative discretion, and selective economic and political intervention. Each explanation explains approximately 6%, 38%, 8%, and 20%, respectively, of change in contractor.

Firm size. Firm size is measured by sales to the agency and size of annual-order contract and explains approximately 6%[86] of

[86]The percentage is based on the calculations reported in Table XXXI.

change in contractor. The incumbent has an increased chance of winning a subsequent annual-order contract as their total sales to the agency increases and as the dollar value of the annual-order contract increases.

Price and market competition. Price and market competition is measured by percent low-bid, price change, firm or escalated bid prices, number of firms solicited, and number of firms bidding and these variables explain approximately 38%[87] of change in contractor. Price competition reveals the advantages of the incumbent contractor, because incumbents are more likely to win consecutive annual-order contracts by significantly underbidding their competitors while realizing an increased contract price. The incumbents' advantage is also seen in their ability to win a consecutive annual-order under strong price competition when there is only a slight change or no change in the contract price. Market competition reveals that incumbents are most successful when they face the least amount of competition.

Administrative discretion. Administrative discretion is measured by the time required to solicit bids and the administration of the DBE policy. These variables explain approximately 8%[88]of change in contractor. Incumbents enjoy their greatest success in winning a consecutive annual-order when

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[87]The percentage is based on the calculations reported in Table XXXI.

[88]The percentage is based on the calculations reported in Table XXXI.

annual-orders are rebid with little or no change in the contract documents and when the incumbents are not DBE firms.

Selective economic and political intervention. The first three explanations explain approximately 50%[89] of the variance in change in contractor. The pool analysis and micro-analysis explain an additional 20%[90] of the variance in change in contractor depending on the contracting circumstance. Under the general research model, 8 of the 13 policy model variables and 2 of the 14 self-interest model variables explained change in contractor. Under the pool and micro-analysis, all of the policy model variables and 13 of the 14 self-interest model variables provided an explanation for change in contractor under at least one contracting circumstance. These findings support the following three conclusions: (1) up to approximately 20% of the variance in change in contractor can be explained by a strategic mix of economic and political factors, (2) the strategic mix of factors is contingent on the contracting circumstance, and (3) political influence in the agency's contract decision is selective rather than systemic.

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[89]The percentage is based on the calculations reported in Table XXXI.

[90]"[A]n additional 20%" means up to a maximum of 20% can be explained by the 5 additional policy model variables and 11 additional self-interest model variables that did not explain change in contractor under the general research model but did explain change in contractor under at least one or more of the pool analysis and micro-analysis regressions. The finding that a variable will explain change in contractor under some circumstances but not all circumstances supports the conclusions that political intervention is selective rather than systemic and that a firm uses a contingency approach when competing for the agency's contracts.

Future research is needed to verify these findings and to identify other factors that will explain the unexplained variance in change in contractor. Other factors of particular interest are the nature of the market and its influence on price and product competition; the nature of the firm as a function of ownership and business methods; the political environment as defined by general elections, campaign contribution, and partisan politics.

B. Political Scientist

For the political scientist, this study adds another in-depth analysis of the distributive effects of government's policy decisions to the literature stream. The study's principal contribution to the research stream in distributive policies is its research design that overcomes several prevailing deficiencies of distributive policies theory. Michael J. Rich (1993) identified five reasons why distributive policies theory is deficient on both conceptual and empirical grounds.

1. Lack of rigorous and systematic analysis of individual government programs.

Rich criticized scholars for having few rigorous and systematic empirical analyses that examine the distributional consequences of individual government programs. This study overcomes this deficiency by developing an analytical framework consisting of economic as well as political variables to

determine the factors that best explain how a single agency systematically distributes its contracts.

2. Use of highly aggregated benefits.

Rich criticizes the prevailing basis for scholars' understanding of government's distributional outcomes, because their understanding is based on highly aggregated measures such as total federal expenditures that answer only macro-type questions of whether constituencies receive more tax benefit than they pay. This study overcomes this deficiency by using micro-data that directly measure both the economic and political factors that are most likely to cause a change in the geographic dispersion of an agency's contract distribution.

3. Reliance on simplistic notions of public policy making.

Rich states that the present theoretical framework does not detail the processes involved in the distributional outcomes by noting that recent studies have relied on relatively simplistic notions of public policy making. This study overcomes this deficiency by identifying both the nine actors who directly or indirectly control of the agency's contract decisions and the five phases of their contract decision making process. The nine actors and five phases are identified, because this study shares Allison's (1971) viewpoint that government decisions are not made by a "single calculating decision maker" using a simplistic formula for decision making.

4. Serious lack of focus on state and local government.

Rich states that the research stream in distributive policies lacks studies regarding the distributive decisions of state and local government. Rich believes that this is a serious conceptual void because state and local governments do play an important role in government policy making. This study overcomes this deficiency by filling the void with a study of the distributional decisions of a single agency.

5. Missing interaction among different levels of government

Rich points out that the current research stream focuses on how the federal government spends money and does not consider how state or local governments make their own distribution decision based on their local needs. This study overcomes this deficiency by analyzing how one federally funded agency distributes its contracts for goods and services across four political regimes in the city of Chicago.

Economic factors provided the dominant explanation for change in contractor. However, this study also found evidence of distributive policies where contracts could be targeted to benefit a select few rather than the public good. Four relationships provided the evidence of distributive policies under some contracting circumstances: (a) firms located in politically strong wards were more likely to win the agency's contracts, (b) change of the appointed officeholders explained

change in contractor, (c) the bureaucrats' efficient use of administrative review time favored incumbent contractors rather than challenging firms, and (d) incumbents realized excess benefits by winning larger contracts with larger price increases while competing against fewer firms.

C. Public Officials and the General Public

For the public officials and the general public who are interested in making government purchasing more efficient and effective, this study provides an in-depth analysis of an agency's contract decision making process, and verifies several premises commonly accepted by public officials as well as the general public.

1. Bureaucrat's discretion influences contract decisions.

The liberals' attitudes towards bureaucrats claim that bureaucrats are timid, unimaginative, and reluctant to make decisions. The conservatives' attitude towards bureaucrats claims that all agencies try to assume a controlling voice over governmental decisions. This study confirms both the liberal and conservative attitudes, because four of the five administrative review times used by the bureaucrats to make contract decisions explained change in contractor under at least one contracting circumstance; only one administrative review time failed to explain change in contractor under any set of contracting

circumstances. However, no administrative review time provided a dominant explanation across all contracting circumstances.

Consequently, the findings support the proposition that some of the agency's bureaucrats are timid, unimaginative, and reluctant to make decisions and give this treatment to most types of contractors. On the other hand, there is statistical evidence to support the proposition that some bureaucrats assume a controlling voice over the agency's contract decisions.

2. Full and open competition protects the public's trust in the government's procurement process.

Procurement law requires competition for government contracts and procurement law uses competition as the critical benchmark for the definition of a credible government contracting system. The public believes that full and open competition provides inherent market disciplines for the nonmarket, government contracting process; the public believes that full and open competition will minimize costs, maximize opportunity for the best firm to win a government contract, and thereby yield the lowest-cost goods and services for a given set of market parameters. This study supports the competitive requirements of procurement law and supports the public's belief regarding full and open competition. Competition puts pressure on incumbent contractors to keep their prices low. In fact, the most

compelling finding is that a challenging firm's chance of winning an agency contract increases as competition for the contract increases, and when a challenging firm wins a contract, their contract price is generally lower than the previous contract price.

D. Final Comments

I believe the following two comments are important for the reader. First, the word "model" has been used throughout this study to include a set of economic variables that measure the influence of policy. The reader is cautioned not to interpret the policy model as an economic model grounded in economic theory. Rather, the policy model is only a set of economic measures such as price and competition, and the policy model is only intended to determine the joint effect of these economic measures on change in contractor. Additional work is needed to develop an economic model of government procurement and that work is beyond the intended scope of this study.

Second, three measures of political influence are used in this study to explain change in contractor. These measures are regimes as defined by Chart V, mayoral terms as defined in Table XXXVI, and the transition in political influence as defined on page 247. In addition to these three measures of political influence, measures are also created to determine the political value of location and to track the change in political and

bureaucratic actors. Most of the variables used to measure political influence explained change in contractor under at least one contracting circumstance. However, this study does not answer which measure is the best measure of political influence. I hope future research will critically examine the transition in political influence between mayoral terms to determine whether the change in political influence is a gradual and orderly or abrupt and sudden shift in power from one mayor and his or her allies to the next mayor. Determining the point at which political power is transferred is critical to establishing whether politics influences an agency's geographic distribution of its benefits.

APPENDIX A

HIGHLIGHTS OF CTA'S TRANSFORMATION FROM CHICAGO SURFACE LINES BY LIND

February 27, 1925, the Chicago City Council passed an ordinance providing for a "Comprehensive Municipal Local Transportation System" by a vote of 40 to 5.

April 7, 1925, the ordinance was defeated in referendum and thereby rejected the policy of municipal ownership and operation of the railroad properties.

June 19,1941, City Council passed a traction ordinance by a vote of 40 to 6. The ordinance required unification of Chicago Surface Lines and Chicago Rapid Transit Company; acquisition of Chicago Motor Coach Company is permissive.

June 1, 1942, Unification ordinance approval by the electors with 238,571 voting for and 22,626 voting against the proposition.

February 1, 1943, Examiner for Illinois Commerce Commission Report stated that the reorganization plan of Chicago Transit Company was basically unsound and should be disapproved.

September 21, 1943, Mayor Kelly issued public statement announcing that the City is opposed to separate reorganization, will grant no franchise without unification...Mayor hinted at revolutionary proposal that might be necessary if they fail to achieve unification immediately.

October 13, 1943, Mayor Kelly presented to the City Council a plan for acquisition and operation by the City of Chicago of all local transportation systems.

February 17, 1945, Governor Green and Mayor Kelly agreed to propose, to the various legislative bodies, a comprehensive transit plan providing for a Metropolitan Transit Authority which may acquire and operate all local transportation in Metropolitan Cook County.

April 12, 1945, Governor Green signed the Transit Authority Act, which was passed by the State Legislature on April 5, 1945

April 23, 1945, City Council passed an ordinance granting exclusive right to Chicago Transit Authority to operate a local transportation system within the City of Chicago by a 44 to 0 vote.

October 1, 1947, Operation of the properties formerly known as Chicago Surface Lines and Chicago Rapid Transit Company was begun by Chicago Transit Authority as a unified system.

SOURCE: Lind's book, Chicago Surface Lines

APPENDIX B

A BRIEF HISTORY OF THE CHICAGO TRANSIT AUTHORITY

The Chicago Transit Authority (CTA) operates the second largest public transportation system in the United States. Each weekday, CTA provides approximately 1.9 million trips. The total number of unlinked trips provided in 1990 was 568 million.

The CTA operates 2,172 buses on 133 routes, totaling 2,147 route miles. There are 12,900 posted bus stops and CTA buses make more than 24,650 trips per day. On the rapid transit system, more than 1,968 train trips are made each day. There are 215 miles of track. The CTA's fleet of 1,214 rail cars operates over six routes with a total of 143 stations.

The CTA's service area consists of the city of Chicago and 37 surrounding suburbs, with a total population of over 3 million.

Much of the CTA's infrastructure was build between 1892 and 1920. This includes approximately 40 miles of elevated structure and the stations, and several bus and rail maintenance facilities. Several rail lines and extensions, and various other facilities were built during or after World War II.

The CTA exists under the state of Illinois Metropolitan Transit Authority Act of 1947. On October 1, 1947, the CTA began operation. CTA is a municipal corporation under the laws of the state of Illinois, and has the power to enter into contracts, to sue and be sued, to exercise eminent domain, to receive and expend grants as required into order to operate and maintain a public transportation system in and around the city of Chicago.

The governing arm of the CTA is the Chicago Transit Board consisting of seven members. Four members of the Board are appointed by the mayor of Chicago, subject to the approval by the city council and the governor; and three members are appointed by the governor, subject to the approval by the state senate and the mayor of Chicago.

In 1974, after the enactment of state legislation and a referendum, the Regional Transportation Authority (RTA) was created with jurisdiction over six Illinois counties in the metropolitan area. One of the prime functions of the RTA is to provide and channel public funds to operators of local transportation in the six county area as a supplement to fare collections in paying operating expenses.

Currently, the CTA is one of the three service boards under the financial umbrella of the RTA. The other service boards are the Commuter Rail and Suburban Bus Divisions, know respectively as Metra and Pace. Unlike Metra and Pace, the CTA is not a division of RTA, but functions under its own enabling legislation. However, the CTA's budget and capital program are subject to virtually the same RTA constraints as Metra and Pace. RTA has the power to approve or disapprove the CTA's annual budget and three-year financial plan, and all capital projects over $250,000.

APPENDIX C

DEFINITIONS

Adequate Price Competition

Federal procurement practice uses the following criteria to determine whether adequate price competition exists:

1. There are at least two offerers;
2. These offerers can satisfy the requirements identified by the purchaser;
3. The offerers are independently contending for the award; and
4. The offerers submit price offers that are responsive to the requirement of the solicitation.

Federal procurement practices assume that the greater the competition, the greater the assurance of independence of contending offerers. Price competition is reduced when some bidder may have a pricing advantage because a particular component that is not available to all bidder is required in order to meet the performance, or if the non-technical terms and conditions unreasonably deny one or more known and qualified sources the opportunity to compete.

Aggregate Contract Value[1] - The following financial information is the basis for aggregate value as shown on page 34 for all CTA contracts.

OPERATING EXPENSES

	Fiscal Year Ended Dec. 29, 1990	Dec. 30, 1989
Labor	$539,495,177	$508,419,629
Material and supplies	66,795,298*	56,544,608*
Fuel	18,808,691*	13,836,807*
Electric power	20,055,268*	22,308,054*
Provision for injuries and damages	22,400,000	17,612,100
Maintenance & repairs, utilities, rent and other[2]	60,878,039*	58,424,252*
TOTAL	$728,432,473	$677,145,450
* MATERIAL, SUPPLY, & SERVICE EXP.	$166,537,296	$151,113,674

[1]Source: CTA Comprehensive Annual Financial Report, Fiscal Year ended December 29, 1990, Chicago, Illinois.

[2]This line is comprised of utilities, maintenance & repair, advertising & promotion, contractual services, the purchase of security services, leases & rentals, travel & training, warranty and other credits, and general expenses.

APPENDIX C (continued)

Aggregate Contract Value (continued)

AVERAGE MATERIAL, SUPPLY & SERVICE COSTS		$158,825,485
CAPITAL GRANTS AWARDED		
Federal Program	$229,600,000	$270,900,000
Regional Grants	170,200,000	-0-
TOTAL	$390,800,000	$270,900,000
AVERAGE CAPITAL GRANTS AWARDED		$330,850,000

TOTAL VALUE OF CONTRACTS AND ORDINANCES FOR MATERIALS, SUPPLIES, AND SERVICES FOR THE 1989-90 FISCAL YEARS:

Average expenditure from operating revenue	$158,825,485
Average expenditure from capital grants	330,850,000
TOTAL	$489,675,485

Chicago Transit Authority

The Chicago Transit Authority ("CTA") was formed in 1945 pursuant to the Metropolitan Transportation Authority Act passed by the Illinois Legislature. The CTA was established as an independent governmental agency, an Illinois municipal corporation, "separate and apart from all other government agencies" to consolidate Chicago's public and private mass transit carriers. The City Council of the city of Chicago granted the CTA the exclusive right to operate a transportation system for the transportation of passengers within the city of Chicago. The CTA is funded by farebox revenue which supports 55% of its operating budget and receives operating and capital assistance from the Federal Transit Administration, State of Illinois, and the Regional Transportation Authority. Since the early 1970's through 1992, the CTA received over $500 million in financial assistance from the State of Illinois and the Regional Transportation Authority and over $2 billion from the Federal Transit Administration (source: public records).

Competition[1] **Full and Open Competition.** All procurement transactions will be conducted in a manner providing full and open competition. Some of the situations considered to be restrictive of competition include, but are not limited to;

(1) Unreasonable requirements placed on firms in order for them to qualify to do business;
(2) Unnecessary experience and excessive bonding requirements;
(3) Noncompetitive pricing practices between firms or between affiliated companies;

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[1]Federal Transit Administration (FTA, 1995, pages 7-8).

APPENDIX C (continued)

Competition:Full and Open Competition (continued)

(4) Noncompetitive awards to any person or firm on retainer contracts;
(5) Organizational conflicts of interest. An organizational conflict of interest means that because of other activities, relationships, or contracts, a contractor is unable, or potentially unable, to render impartial assistance or advice to the grantee; a contractor's objectivity in performing the contract work is or might be otherwise impaired; or a contractor has an unfair competitive advantage;
(6) The specification of only a "brand name" product without listing its salient characteristics and not allowing "an equal" product to be offered; and
(7) Any arbitrary action in the procurement process.

Competitive Specifications[4] The specification is intended to be descriptive but not restrictive. It is solely for the purpose of establishing the type and quality of good or service that will meet the approval of the CTA. Whenever brand, manufacturer, or product names are indicated in the specification, they are included only for the purpose of establishing identification and a general description of the item. Whenever such names appear, the term "or approved equal" is considered to follow.

The specification shows characteristics and features that will be used as a basis for establishing the level of quality and versatility required. Some requirements must be considered as minimums, while others, as stated herein, are approximate. The amount of variation permitted will be viewed as to its total effect on the overall performance of the equipment.

Any proposed alternate form of the referenced product specification must be documented by the bidder as to its compatibility and performance as being "equal to" the referenced item. The Authority retains the exclusive right to determine acceptability of alternate proposals.

Conflict: Period of Conflict (Table V, page 69) - The period of conflict is the transition period between mayoral regimes. The transition periods between mayoral terms ought to be times of conflict due to the lag between changes in bureaucrats and suppliers after the mayor changed. This lag should cause a fracture in the cozy triangle until the appointment of a new politician to carry out the policy of the new mayor and help form a new cozy triangle. Conflict should be present because

[4]These are standard CTA statements used in bid documents.

APPENDIX C (continued)

Conflict: Period of Conflict (continued)
politicians change with the swiftness of election day, while the old appointed politician, loyal to the outgoing mayor, is still administering policy and its implementation. Therefore, one can expect to find conflict or less consensus during the transition period until the appointed politician is replaced and less conflict and more consensus after the new appointed politician is in office.

Consensus: Period of Consensus (Table V, page 69) - The period of consensus is when the incumbent mayor has his or her regime in office. In regards to the CTA, a mayoral regime begins when the mayor's choice for chairman and president receive their respective appointments, and the regime ends when any one of the three leave office. During the period of the study, all regimes ended when the mayor left office.

Cost Analysis In the absence of adequate price competition, and where price analysis by itself does not assure the reasonableness of an offerer's price, cost analysis must be used to achieve a fair and equitable pricing arrangement.

Disadvantaged Business Enterprises (DBEs) means a small business concern (a) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals, or, in the case of any publicly owned business, at least 51 percent of the stock is owned by one or more socially and economically disadvantaged individual or individuals; (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it. (Source: CTA records)

Formal Advertising The formal advertising, or bid method of purchasing goods and services is the preferred procurement method, because the forces of the marketplace are assumed to work to keep prices reasonable when several competing firms are vying for the agency's contracts. Formal advertising includes the following four elements:

1. Bids are solicited from prospective contractors who are furnished clear, accurate, definitive descriptions of the technical requirement for the goods, materials, or services to be provided.
2. Prospective contractors are given adequate time to prepare and submit bids prior to their public opening. The time and date of the bid opening are stated in the solicitation documents.
3. Prospective contractors respond to the solicitation by submitting sealed bids, which are opened publicly.

APPENDIX C (continued)

Formal Advertising (continued)

4. Award of contract is made to a bidder who is judged to be responsive and responsible according to established evaluation criteria and who has submitted the lowest evaluated price.

The use of formal advertising for sealed bids assumes that there is adequate price competition. Formal advertising assumes that the workings of the open marketplace will insure the reasonableness of price.

No-Bid Response[5] In the event of a "No Bid" response the Contractor must indicate...the reason why he is declining to bid...[reasons for submitting a "No Bid"]:...Unable to bid competitively, cannot meet shipping/delivery requirements, unable to accommodate order size, do not supply the item, unable to meet DBE requirements, obsolete part/lot number, other reasons.

Perfect Competition[6] an economist's definition: (1) There are numerous buyers and sellers such as no one buyer or seller can materially influence the total market conditions of demand, supply or price;(2) The commodities and services being sold and bought are homogeneous; (3) There are no restrictions on the entry or exit of firms from the market; (4) All buyers and sellers have perfect knowledge of the product or services being sold and the price of those transactions.

Price The purchasing agent and contract officer do not consider price to be a simple, singular concept as the public likes to believe it is. To the government, and I'm sure private corporations also share this view, the proper price level or value of the supplies or services to be purchased can be based on any one of several factors. Price can be based on simple budgetary estimates to complex estimates based on inspection of the product itself and a review of such items as drawings, specifications, and cost and price data from previous purchases. These factors are used in the search for or determination of "reasonable prices" to ensure the government does pay "unreasonable high prices" even though a particular price may be from the lowest overall bidder, because prices which are unreasonably low can also be detrimental to good procurement. A price which is too low can indicate a mistake by the bidder, can be evidence that the offerer is not responsible, can indicate

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[5]Summarized from CTA policy.

[6]W. W. Haynes and W.R. Henry, Management Economics, Analysis and Cases Business Publications, Inc., Dallas, Texas, 1974, p.93.

APPENDIX C (continued)

Price (continued)
that an offerer does not understand the work to be performed, or can alert the grantee that the contractor is attempting to "buy in." (see Federal Transit Administration, Alert No. 8, Cost and Price Analysis, dated April 19, 1994, U.S. Department of Transportation, Federal Transit Administration, 400 Seventh St. S.W., Washington, D.C. 20590.

Price Analysis Price analysis is the process of examining and evaluating a price submitted by a bidder to determine whether it is reasonable. The agency is required to determine reasonableness of a bid price by federal regulations such as OMB Circular A-87 and Part 31, Federal Acquisition Regulations. Price analysis can be used to justify reasonableness of price under the following circumstances: where adequate competition exists, where standard commercial items are readily available and sold the to public in substantial quantities in a price competitive market, or where the agency is purchasing standard items that have a clear price history. Methods for conducting a price analysis: compare competitively submitted prices.

Price Competition Price competition exists if offers are solicited and (1) at least two responsive offerers, (2) who can satisfy the (government's) requirements, and (3) independently contend for a contract to be awarded to the responsive and responsible offerer submitting priced offerers responsive to the expressed requirement of the solicitation.[7]

Responsibility (CTA, 1992)
In determining the responsibility of any bidder, the Authority, through its authorized agent, may take into account other factors in addition to financial responsibility and specification compliance, including but not limited to, past records of the Authority's transactions with the bidder, experience, adequacy of equipment, special or unique skills and ability to compete performance within a specified time limit. (Source: CTA records).

Responsiveness of Bids (CTA, 1993). To be considered for award, a bid must comply in all material aspects with the Invitation for Bids ("IFB"). This applies to both the method and timeliness of submission and the substance of any resulting contract. It is imperative that all bidders be afforded an equal opportunity so that the integrity of the bidding system is maintained. Telegraphic bids should not be considered unless permitted by IFB. Bids should be completed, executed, and submitted in

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[7]Department of Defense, Defense Acquisition Regulations, Washington, D.C.: Government Printing Office, 1976, p.2.

APPENDIX C (continued)

Price (continued)
that an offerer does not understand the work to be performed, or can alert the grantee that the contractor is attempting to "buy in." (see Federal Transit Administration, Alert No. 8, Cost and Price Analysis, dated April 19, 1994, U.S. Department of Transportation, Federal Transit Administration, 400 Seventh St. S.W., Washington, D.C. 20590.

Price Analysis Price analysis is the process of examining and evaluating a price submitted by a bidder to determine whether it is reasonable. The agency is required to determine reasonableness of a bid price by federal regulations such as OMB Circular A-87 and Part 31, Federal Acquisition Regulations. Price analysis can be used to justify reasonableness of price under the following circumstances: where adequate competition exists, where standard commercial items are readily available and sold the to public in substantial quantities in a price competitive market, or where the agency is purchasing standard items that have a clear price history. Methods for conducting a price analysis: compare competitively submitted prices.

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[7]Department of Defense, Defense Acquisition Regulations, Washington, D.C.: Government Printing Office, 1976, p.2.

APPENDIX C (continued)

Responsiveness (continued)
accordance with the instructions contained in the IFB. If a bidder uses its own bid forms or a letter to submit a bid, the bid should be considered only if:

1. the bid document clearly indicates the bidder accepts all the terms and conditions of the invitation; and
2 award would result in a binding contract which does not vary from the terms and conditions of the IFB. To assure uniformity of bids, bidders should be urged to use the IFB form furnished by the procurement administrators.

Sealed Bid Method[6] Procurement By Sealed Bids/Invitation for Bid (IFB). Bids are publicly solicited and a firm-fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid, conforming with all the material terms and conditions of the invitation for bids, is the lowest in price.

(1) In order for sealed bidding to be feasible, the following conditions should be present:
   (a) A complete, adequate, and realistic specifications or purchase description is available;
   (b) Two or more responsible bidders are willing and able to compete effectively for the business;
   (c) The procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price;
   (d) No discussion with bidders is needed.

(2) If this procurement method is used, the following requirements apply:
   (a) The invitation for bids will be publicly advertised and bids shall be solicited from an adequate number of known suppliers, providing them sufficient time to prepare bids prior to the date set for opening the bids;
   (b) The invitation for bids, which will include any specifications and pertinent attachments, shall define the items or services sought in order for the bidder to properly respond;
   (c) All bids will be publicly opened at the time and place prescribed in the invitation for bids;
   (d) A firm fixed-price contract award will be made in writing to the lowest responsive and responsible bidder. When specified in bidding documents, factors such as discounts, transportation costs, and life cycle

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[6]Federal Transit Administration (FTA, 1995, pages 9-10).

APPENDIX C (continued)

Sealed Bid Method (continued)
costs shall be considered in determining which bid is lowest;

Payment discounts will only be used to determine the low bid when prior experience indicates that such discount are usually taken advantage of; and

(e) Any or all bids may be rejected if there is a sound documented business reason.

Small Business Concern means a small business as defined pursuant to Section 3 of the Small Business Act and relevant regulations promulgated pursuant thereto except that a small business concern shall not include any concern of group of concerns controlled by the same socially and economically disadvantaged individual or individuals which has annual average gross receipts in excess of $16.6 million over the previous three fiscal years. The U.S. Secretary of Transportation shall adjust this figure from time to time for inflation. (Source: CTA records)

Socially and Economically Disadvantaged Individuals means those individuals who are citizens of the United States (or lawfully admitted permanent residents) and who are women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans and any other minorities or individuals found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act. (Source: CTA records)

Justification for Using Annual-order Contracts as a Basis of Comparison of the Agency's Contract Decisions Across Four Mayoral Terms

There is no significant difference in the contract requirements between the consecutive annual-order contracts that would cause a change in contractor. It is believed that there are only two sources for change in contractor: (1) changes in the market, or (2) change in the public officials' use of their discretionary decisions. The general research model includes economic variables to measure changes in the market and includes political variables to measure change or the basis for change in how the public officials use their discretionary decisions.

The annual-order requirements provide an excellent baseline for measuring the influence of the market and local politics in the agency's contracting process, because the annual-orders have the following characteristics:

APPENDIX C (continued)

Justification for Using Annual-order Contracts as a Basis of Comparison of the Agency's Contract Decisions Across Four Mayoral Terms (continued)

1. Time between consecutive annual-order contracts is approximately one year. Most of the annual-orders included in the population sample represent three or more consecutive contracting events and covered most of the research period.

2. The actual quantity required of each commodity included in the annual-orders remain relatively constant. In most cases, the annual-order dollar value remained the same from one year to the next and gradually increased or decreased over time. In the few cases where the dollar value fluctuated greatly, the dollar value may not have reflected the agency's true need for the commodity.

3. No special or extraordinary circumstances are represented in the annual-order population sample, such as special delivery requirements not included in previous years or environmental and proprietary products.

The consecutive annual-orders included in the population sample represent comparable buys under conditions that should be comparable unless the buying conditions are altered due to market forces or political interests.

APPENDIX D

THE AGENCY'S DBE POLICY

54.9 Disadvantaged Business Enterprises

It is the policy of the Authority to provide maximum opportunities for Disadvantaged Business Enterprises (DBE) to participate in the Authority's contracts. Presidential Executive Orders 11625, 12138, US DOT Regulations, 49 D.F.R. Part 23, and section 106(c) of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (STURAA) authorize the Authority's DBE Program. In this regard, all contracts in excess of $1,500 shall contain a DBE participation goal, which shall be assigned by the DBE/EEO Program/Contract Compliance Department. The DBE goal shall be included in the solicitation documents.

Compliance with the DBE participation goal may be achieved by a bidder's compliance with any one of the following:

1. A non-DBE contractor subcontracting with a certified DBE, in its area of certification, to meet the DBE participation goal; or
2. Performance of the contract by a certified DBE in its area of certification; or
3. A non-DBE contractor not meeting the full DBE participation goal but, in addition to partial compliance, submitting statements of good faith efforts acceptable to CTA; or
4. A non-DBE contractor not complying with the DBE participation goal, but submitting statements of good faith efforts acceptable to CTA.

For competitively bid contracts in excess of $5,000, the Purchasing Department will forward information regarding the bidders' attempts to comply with the DBE participation goal to the DBE/EEO Program/Contract Compliance Department. The DBE/EEO Program/Contract Compliance Department shall review compliance to CTA/s DBE participation policy.

For competitively bid contracts in excess of $1,500, but not exceeding $5,000, the Purchasing Department shall use its best efforts to allow maximum opportunity for a review and recommendation by the DBE/EEO Program/Contract Compliance Department of information regarding the bidders' attempts to comply with the DBE participation goal.

For contracts not requiring competitive bidding, as described in Sections 54.3 and 54.4 of these Regulations, the DBE/EEO Program/Contract Compliance Department shall be notified at the beginning of the procurement. The DBE/EEO Program/Contract Compliance Department, thereafter, shall gather information during the solicitation and shall work with the Materials Management Division to maximize the amount of DBE participation

APPENDIX D (continued)

in the contract, taking into account the urgency of the situation and other relevant circumstances.

In cases where the lowest responsive bidder does not meet the DBE participation requirements set for the above, the Authority, through its authorized agent, shall:

1. Award the contract to the bidder who achieves the maximum amount of DBE participation, within the practical economic limits as determined by the Authority, through its authorized agent, to be in its best interests; or
2. Cancel the procurement and rebid.

New Section, Adopted by Ord. No. 90-209, November 6, 1990
(As amended by Ordinance No. 92-87, passed April 20, 1992)

Chicago Transit Authority, The Regulations Governing Purchase and Sales Transactions, April 1992, (As Amended).

APPENDIX E

ANNUAL-ORDER CONTRACTS INCLUDED IN THE POPULATION SAMPLE

TABLE XXXXI: ANNUAL-ORDER CONTRACTS INCLUDED IN THE POPULATION SAMPLE

Contract Number	Description of Requirement	Period Covered To/From	Number of Events	Latest Dollar Value (in 000's)
007	gear & pinions sets	11/92-8/81	8	90
010	Lincoln lubricating equipment	12/92-11/82	6	100
019	rain suit supplies	10/92-9/88	2	25
021	radiator cores	5/92-12/82	8	100
041	flashlights	2/92-1/83	7	20
044	oil filters	6/93-4/83	6	60
062	steel nuts	3/92-2/83	7	20
066	traction motor brake shoes	1/93-7/83	8	400
071	roof & hatch assembly parts	12/92-6/88	4	23
074	12-volt batteries	1/93-5/82	8	325
075	hand cleaners	2/91-1/83	5	20
081	masking tape	4/93-1/85	6	30
094	no.1 and no.2 torpedo sand	4/92-9/82	8	40
096	crushed limestone	12/92-1/83	8	43
100	refrigerant gas	4/92-1/82	8	200
104	electric switch	4/92-10/83	8	20
106	tempered glass, bus side body	4/91-7/87	2	75
110	insecticide	11/92-3/85	4	30
133	radiator repair, bus engine	5/92-9/85	4	150
134	extermination service on rail cars	2/91-4/85	3	48
148	COM microfiche service	7/91-10/83	6	35
153	graphic photographic film	1/92-7/86	3	30
156	nails and tacks	3/91-9/80	8	10
166	fuel filter valve	9/91-1/85	6	12
173	parts: air dryer end, G.M.C.	8/92-7/87	3	80
179	corrugated paper	10/90-8/86	3	40
181	wiring harness, bus diesel engine	4/91-1/85	5	30
184	door parts	5/92-12/88	3	30
185	toilet paper	11/91-5/83	7	60
193	cartridge fuses	11/90-7/84	6	20
199	Delco-Remy assemblies	1/92-3/83	7	320
202	new tires and repairs	3/92-5/83	7	12
213	repairs to AC electrical motors	5/91-7/81	6	29
214	auto & truck glass	1/93-5/86	3	40
221	sheet steel	4/92-2/84	6	100
222	aluminum sheets	4/92-4/84	7	250
229	liquid detergent	9/92-4/83	6	40
234	pipe unions	3/93-6/90	2	15
242	first aid supplies	6/93-3/90	2	20

TABLE XXXXI: ANNUAL-ORDER CONTRACTS INCLUDED IN THE POPULATION SAMPLE (continued)

Contract Number	Description of Requirement	Period Covered To/From	Number of Events	Latest Dollar Value (in 000's)
245	drycell batteries	3/92-5/83	6	50
247	delivery service for monthly passes	11/90-9/82	5	210
259	shock absorbers	9/90-3/84	4	200
268	auto engine starter parts	8/92-12/85	5	20
282	bond paper	3/91-5/83	8	400
290	salt, bulk rock	3/93-5/84	8	175
295	brake system parts	4/92-12/82	6	80
303	parts: air bellows bags	12/90-3/84	4	300
306	fire extinguisher	1/93-10/82	8	300
314	suspension stabilizer parts	6/92-3/85	5	30
324	fuel injector parts	2/93-7/83	7	60
325	Ford Motor Co. parts	6/92-10/83	7	160
340	dumping privileges	2/93-10/87	4	115
342	glass cleaner	3/93-7/88	4	25
343	paving	5/92-1/83	7	200
375	supplies for Xerox 9700	12/92-11/83	5	60
378	batteries	10/91-9/83	5	35
382	GMC truck repair parts	6/92-4/86	4	60
383	envelopes	2/92-12/88	2	100
389	fuel filter elements	7/91-11/84	5	35
390	pipe & tube fittings	3/92-11/82	7	50
391	steel pipe	5/92-3/86	4	30
396	cleaning compound	11/92-8/86	4	50
399	electric motor	1/93-2/85	5	30
400	boiler water treatment	12/91-7/84	4	30
403	D-2 air governors	11/91-3/83	7	25
404	general purpose cleaner	11/92-12/88	2	25
406	bus brake slack adjuster	7/92-3/84	7	150
419	plumbing work	10/92-7/83	7	200
423	tires & tubes for auto and truck	1/93-2/84	6	150
429	overhead door	3/91-6/83	7	90
434	bus engine thermostats	6/92-11/85	6	15
439	used oil testing analysis	8/90-11/82	5	300
443	electrical components (Square D)	7/92-10/85	4	25
444	electrical copper wire	10/92-7/85	5	50
445	absorbent compound supplies	1/92-3/84	5	30
450	electrical connectors	4/91-3/83	8	10
463	canvas gloves	1/92-3/83	7	30
467	printing: trip sheets	10/92-6/83	5	35
471	aluminum chain	12/92-2/84	7	50
476	machine wood screws	4/91-5/87	2	50
477	high speed twist drills	11/92-12/88	3	50

TABLE XXXI: ANNUAL-ORDER CONTRACTS INCLUDED IN THE POPULATION SAMPLE (continued)

Contract Number	Description of Requirement	Period Covered To/From	Number of Events	Latest Dollar Value (in 000's)
479	unleaded gasoline	11/91-12/92	5	750
484	silicone lubricant, aerosol	9/91-8/83	5	25
486	compressors	1/93-3/83	5	225
498	hand wrench tool	11/92-1/83	8	25
510	snow plow, rail car blades	8/92-11/83	6	90
514	shaft assembly	8/92-7/88	3	20
515	electrical circuit bond	5/91-8/88	3	25
518	bus speedometer arts	9/91-9/87	3	20
523	respirator supplies	3/92-7/88	2	120
526	bus mirror assemblies	12/92-3/86	5	200
527	parts for Alemite lubrication equipment	10/91-10/82	5	50
529	fan assembly	1/92-1/83	6	140
537	motor: traction, re-wind	4/92-1/86	6	450
545	copper bonds	10/92-7/83	7	100
552	concrete work	5/91-6/82	5	410
559	fire extinguisher	11/91-11/82	7	30
565	part: crossover pipe, bus	8/92-2/85	6	20
570	parts for 2600 rail cars	7/92-9/88	2	65
576	electrical hardware	4/92-4/85	3	15
590	printing: custom continuous forms	11/92-2/84	5	600
596	rail: air bellows, traction motors	2/92-3/84	4	75
602	heaters: electromode	5/92-6/83	6	35
616	printing: form no. 3545	12/91-8/83	5	20
623	parts: hydraulic governor	5/91-10/88	2	30
632	photographic color separations	3/91-12/87	2	40
635	rubbish removal service	11/91-9/83	5	600
654	rebuild transmission	5/92-5/87	4	40
658	paper: bond for copying	6/92-8/87	3	130
661	wiring harness	1/92-7/88	3	25
671	bus engine camshaft parts	2/93-9/83	6	35
675	concrete patching compound	5/91-7/87	2	30
699	rock salt, bags	11/92-8/83	6	35
700	video editing	2/92-4/84	5	26
707	cylinder head kit, diesel engine	1/92-1/87	4	20
708	touch bar assemblies	1/92-4/88	3	200
714	bus steering units	3/93-2/84	5	100
716	catch basin cleaning service	3/93-11/83	4	150
730	eye bracket part	9/91-4/86	3	20
731	parts for fuel injector	1/91-1/86	2	150
734	cotton sheeting	8/92-9/86	5	28
738	wiring harness	6/92-2/88	3	40
751	paints & thinners	11/92-5/86	4	100
757	repair: Copeland compressors	2/91-10/86	2	15
759	electric motors	2/92-9/89	2	50
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TABLE XXXXI: ANNUAL-ORDER CONTRACTS INCLUDED IN THE POPULATION SAMPLE (continued)

Contract Number	Description of Requirement	Period Covered To/From	Number of Events	Latest Dollar Value (in 000's)
765	parts for G.E. propulsion equipment	4/92-1/88	3	200
782	rebuild blower, diesel engine	10/91-3/84	5	65
783	traction motor parts	8/92-11/82	7	100
784	liquid de-icer	7/92-2/89	2	20
786	engine cylinder	1/93-12/87	4	20
787	pallets, reversible	8/92-3/86	3	25
792	crankshafts, regrinding	5/92-11/82	5	50
797	hand pump	1/93-7/88	4	120
802	transmission parts	8/92-11/82	8	600
807	structural steel	11/91-7/88	3	300
816	disc brake for 2400 rail car	6/92-7/87	4	50
819	chemically washed cloth	4/92-12/87	3	100
824	abrasive belts, cloths	3/92-11/86	4	30
826	brushes for power sweepers	7/92-3/84	7	50
827	engine: parts, Detroit Diesel	12/92-3/87	3	750
841	hoses for CTA buses, silicone	1/93-11/83	6	100
842	bolts, nuts & Washers	4/92-3/84	4	100
846	curtains, roller, bus, rail	8/91-9/83	5	200
847	polycarbonate glazing material	1/93-2/83	7	400
849	throttle control part	9/91-11/83	6	50
858	Russwin Security locks	5/92-8/85	4	15
864	liquid cleaner	12/90-5/84	5	50
867	shock absorbers	6/93-4/90	2	75
868	electrical components	5/91-3/87	2	20
883	fan blade	7/91-12/87	2	70
886	brake drum	3/92-3/85	5	300
888	ring & pinion part	7/91-4/86	3	70
911	liquid lotion skin cleaner	10/91-12/87	3	20
915	connector pin	6/91-12/87	3	15
927	electrical cable	11/91-6/84	7	100
939	printing: move ticket	11/91-6/85	4	50
941	rivets	7/91-6/85	5	48
952	stabilizer bar assembly	2/91-8/88	2	30
968	drill: pneumatic	5/92-1/88	3	20
973	engine air cleaner part	7/91-10/88	2	40
976	rail car brake caliper part	7/92-2/88	3	800
979	bearing cones & cups	1/92-2/88	2	25
981	armature shaft	8/92-2/89	3	25
985	parts for track brake (rail)	8/92-4/88	3	500
988	third rail trolley shoes	12/91-3/88	3	50
990	racking: shelves & frames	12/92-3/88	3	50
999	electric, locomotive car cable.	8/92-3/88	3	75

APPENDIX F

POLITICAL VALUE OF LOCATION

SOURCE DOCUMENTS USED TO ESTABLISH THE VALUE OF WARD LOCATION

The political values of ward locations shown in Table XXXXII are determined by using the following source documents which establish whether the ward's alderman and/or ward's constituency voted with the mayor or voted against the mayor.

POLITICAL VALUE OF WARD LOCATION DURING THE FIRST YEAR OF BYRNE'S TERM

Table of "Mayor Primaries by Ward," Chicago Sun-Times, March 1, 1979, city/suburb section, page 8.

POLITICAL VALUE OF WARD LOCATION DURING THE LAST YEAR OF BYRNE'S TERM.

Two sources were used to determine the value of ward location: (1) Map of "The Contest for Cook County Democratic Chairman," Chicago Tribune, March 28, 1982 (Axelrod, 1982) and (2) ward voting for mayor as reported in the Chicago Sun-Times, February 24, 1983.

POLITICAL VALUE OF WARD LOCATION DURING THE FIRST YEAR OF WASHINGTON'S TERM.

Simpson, Dick, Leta Dally, Geneva Jackson, Richard Osty, and Wayne Slaughter, The City Council's Role in Chicago Budget Making, Board of Trustees of the University of Illinois, UIC Office of Publications Services, Chicago, 1990, Map 1, page 14.

POLITICAL VALUE OF WARD LOCATION DURING THE LAST YEAR OF WASHINGTON'S TERM.

Ibid, Map 2, page 15.

POLITICAL VALUE OF WARD LOCATION DURING THE FIRST YEAR OF SAWYER'S TERM.

Ibid, Map 3, page 16.

POLITICAL VALUE OF WARD LOCATION DURING THE LAST YEAR OF SAWYER'S TERM.

Ibid, Map 4, page 17.

POLITICAL VALUE OF WARD LOCATION DURING THE FIRST YEAR OF DALEY'S TERM.

Ibid, Map 5, page 18.

APPENDIX F (continued)

POLITICAL VALUE OF WARD LOCATION FOR THE LATER YEARS OF DALEY'S TERM COVERED BY THIS STUDY

Two sources were used to determine the value of ward location: (1) Simpson, Dick, Lisa Dushkin, Geneva Jackson, Lillian Larsen, Lesia Ockvuch, Wayne Slaughter, The Second Richard Daley and His Un-Council, Board of Trustees of the University of Illinois, UIC Office of Publications Services, Chicago, 1990, Map 2, page 15 and (2) "Aldermanic Agreement with Administration, May 9-June 28, 1991," City Council/County Board Report, Citizens Information Service of Illinois, 332 S. Michigan Ave., Suite 1142, Chicago, Vol. 2, No. 2, Fall 1991, page 10'.

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[9]The studies of the voting record of the city of Chicago Council's aldermen is from the following report: Dick Simpson and Lesia Okruch, "Voting Studies," The Chicago City Council Report and City Council/County Board Report, 1-3, 1990 and 1-3, 1991-1993.

APPENDIX F (continued)

TABLE XXXXII: POLITICAL VALUE OF LOCATION: Individual Regime Values and Total Political Values for Each Ward

WARD	MAYORAL TERM				TOTAL OF POLITICAL VALUES
	BYRNE	WASHINGTON	SAWYER	DALEY	
1	4	3	4	4	14
2	4	4	2	2	12
3	4	4	2	2	12
4	4	4	2	2	12
5	3	4	2	2	11
6	4	4	4	2	14
7	4	4	2	4	14
8	3	4	3	4	13
9	3	4	3	2	12
10	4	2	4	4	14
11	2	2	4	4	12
12	2	3	4	4	13
13	2	2	4	4	12
14	4	2	3	4	12
15	4	3	4	4	15
16	4	4	4	4	16
17	4	4	2	4	14
18	3	2	4	4	13
19	2	2	4	4	12
20	4	4	3	4	15
21	4	4	2	2	12
22	2	3	2	2	9
23	2	2	4	4	12
24	4	4	4	4	16
25	3	3	3	4	13
26	2	3	2	4	11
27	4	4	4	4	16
28	4	4	2	2	12
29	4	4	2	2	12
30	4	3	4	4	13
31	3	3	2	2	10
32	2	2	4	4	13
33	4	3	4	4	15
34	4	4	3	4	15
35	4	3	4	4	14
36	4	3	4	4	15
37	4	3	2	2	11
38	4	2	4	4	14
39	4	3	4	4	15
40	4	3	4	4	14
41	4	3	4	4	15
42	2	4	4	4	14
43	4	4	2	4	14
44	4	3	3	4	12
45	2	2	4	4	12
46	4	3	2	2	10
47	4	3	4	4	15
48	4	4	4	4	15
49	4	4	2	2	12
50	4	3	4	4	16

APPENDIX F (continued)

DECISION GUIDELINES FOR SETTING POLITICAL VALUE OF WARD LOCATION AS REPORTED IN TABLE F1

BYRNE'S TERM

Three sources are used to measure the political value of ward location during Byrne's term. Table XXXXIII shows the decision guidelines used for determining ward value.

TABLE XXXXIII - SUMMARY OF DECISION GUIDELINES FOR SETTING THE POLITICAL VALUE OF WARD LOCATION DURING BYRNE'S TERM

VALUE OF WARD LOCATION	GUIDELINES FOR WARD VALUE[10]
4	(a) All three sources showed that ward favored Byrne (b) 1979 & 1982 sources showed that ward favored Byrne (c) 2 of 3 sources showed that ward favored Byrne and/or Byrne beat Daley in 1983 (d) Either 1979 or 1982 sources showed that the ward favored Byrne and Byrne beat Daley in 1983 vote.
3	(a) One source showed that ward favored Byrne and Byrne beat Daley in 1983 and/or one undecided or questionable vote. (b) Byrne beat Daley in 1983 and at least one undecided or questionable support in 1979 or 1982.
2	(a) All three sources showed that ward opposed Byrne (b) 1979 & 1982 sources showed that ward opposed Byrne (c) 2 of 3 sources showed that ward opposed Byrne

The 42nd Ward is has a value of 2 rather than 3 even though Byrne won the 42nd Ward in 1983. The 1979 and 1982 measured showed that Byrne did not have the support of the 42nd Ward while the 1983 measure showed Byrne had a 55% of the electoral vote. Conversely, the 42nd Ward alderman's voting records showed strong support for the other three mayors: 100% for Washington[11], 90.0% for Sawyer[12], and 93.5% for Daley[12].

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[10]The bases for setting the political value of a ward are listed in order of importance where (a) is the most effective indicator of political value and (d) is the least effective measures of the political value of ward location.

[11]Simpson, Dick and Duane Bean, The 1987 Chicago City Council, Publication No. 11.

[12]The percentage for Sawyer and Daley is the average percentage reported in Table XXXXVIII.

APPENDIX F (continued)

WASHINGTON'S TERM

One source is used to measure the political value of ward location during Washington's term. Table XXXXIV shows the decision guidelines used for determining ward value.

TABLE XXXXIV - SUMMARY OF DECISION GUIDELINES FOR SETTING THE POLITICAL VALUE OF WARD LOCATION DURING WASHINGTON'S TERM	
VALUE OF WARD LOCATION	GUIDELINES FOR WARD VALUE
4	Alderman voted with Washington on budget votes in 1983 and 1987.
3	Alderman voted with or in opposition to Washington on budget votes in 1983 and then switched his/her vote in 1987, or vice versa.
2	Alderman voted in opposition to Washington on budget votes in 1983 and 1987.

SAWYER'S TERM

One source is used to measure the political value of ward location during Sayer's term. Table XXXXV shows the decision guidelines used for determining ward value.

TABLE XXXXV - SUMMARY OF DECISION GUIDELINES FOR SETTING THE POLITICAL VALUE OF WARD LOCATION DURING SAWYER'S TERM	
VALUE OF WARD LOCATION	GUIDELINES FOR WARD VALUE
4	Alderman voted with Sawyer on budget votes in 1987 and 1988.
3	Alderman voted with or in opposition to Sawyer on budget votes in 1987 and then switched his/her vote in 1988, or vice versa.
2	Alderman voted in opposition to Sawyer on budget votes in 1987 and 1988.

APPENDIX F (continued)

DALEY'S TERM

Three sources are used to measure the political value of ward location during Daley's term. Table XXXXVI shows the decision guidelines used for determining ward value.

TABLE XXXXVI - SUMMARY OF DECISION GUIDELINES FOR SETTING THE POLITICAL VALUE OF WARD LOCATION DURING DALEY'S TERM

VALUE OF WARD LOCATION	GUIDELINES FOR WARD VALUE
4	(a) Alderman voted with Daley on budget votes in 1989 and voted with Daley in the 4/89 to 3/90 divided role calls and voted over 70% or more with Daley on the divided roll votes May 9 to June 28, 1991. (b) Alderman voted with Daley on budget votes in 1989 and voted with Daley in the 4/89 to 3/90 divided roll calls.
3	Alderman voted with Daley on either the budget votes in 1989 or in the 4/89 to 3/90 divided roll calls and voted between 70% and 50% with Daley on the divided roll call votes May 9 to June 28, 1991.
2	(a) Alderman voted against Daley on budget votes in 1989 and voted against Daley in the 4/89 to 3/90 divided roll calls and voted less than 70% with Daley on the divided roll votes May 9 to June 28, 1991. (b) Alderman voted against Daley on budget votes in 1989 and voted against Daley in the 4/89 to 3/90 divided roll calls.

APPENDIX F (continued)

AN ALTERNATE MEASURE FOR SETTING THE POLITICAL VALUE OF WARD LOCATION

This thesis determined the political value of ward location by identifying whether the alderman voted with or against the mayor during the first year of the mayor's term and comparing that vote with the alderman's vote during the last year of the mayor's term[13]. The beginning and ending votes were used to create an average value to indicate whether the alderman always supported the mayor, supported the mayor sometimes, or never supported the mayor. An alternate method of creating an average value to measure the degree of aldermanic support is to calculate the average value for all divided votes[14] on the council floor during the mayor's term rather than only those votes that occur at the beginning or end of the mayor's term. This section uses the studies of the voting record of the aldermen from the following reports: Dick Simpson and Lesia Okruch, "Voting Studies," The Chicago City Council Report and City Council/County Board Report, 1-3, 1990 and 1-3, 1991-1993. These reports provide the alderman's average voting record expressed as a percentage of the total divided votes.

TABLE XXXXVII: CONVERSION OF PERCENTAGE VOTING TO A CATEGORICAL SCALE OF 2 TO 4

Average percentage voting with the mayor	Political Value of Ward Location	REASONING
100% TO 90%	4	Shows consistently strong support for the mayor during his or her term in office
89% TO 70%	3	Reflects moderately strong support for the mayor which may vary as a function of the issue before the council or the time of his or her term.
LESS THAN 70%	2	Represents consistently low support or opposition of the mayor across all issues during the mayor's term.

[13]For more detail see "3.a. Political value of location factor," pages 119 to 124.

[14]A divided roll call vote is a vote on a substantive, procedural or budget vote where at least one Council member cast a dissenting vote.

TABLE XXXXVIII: POLITICAL VALUE OF LOCATION: Alternate Measure by Percentage

WARD	SAWYER	DALEY
1	3 (86.8%)	4 (98.8%)
2	3 (74.9%)	2 (41.0%)
3	3 (71.8%)	2 (37.0%)
4	3 (75.0%)	2 (41.0%)
5	2 (63.5%)	2 (42.0%)
6	4 (98.6%)	2 (39.4%)
7	4 (93.5%)	3 (78.0%)
8	4 (95.1%)	3 (78.3%)
9	3 (81.6%)	2 (30.7%)
10	2 (55.4%)	4 (98.2%)
11	3 (71.8%)	4 (100.0%)
12	3 (77.3%)	4 (98.5%)
13	2 (62.3%)	4 (90.3%)
14	2 (46.5%)	4 (100.0%)
15	4 (93.8%)	2 (57.3%)
16	4 (90.5%)	2 (49.7%)
17	3 (77.8%)	2 (63.5%)
18	2 (64.0%)	4 (98.2%)
19	2 (63.0%)	3 (87.0%)
20	4 (94.8%)	3 (71.2%)
21	2 (66.0%)	2 (40.3%)
22	3 (70.1%)	2 (59.2%)
23	2 (49.8%)	4 (98.8%)
24	3 (82.9%)	2 (63.3%)
25	4 (92.8%)	4 (95.8%)
26	3 (69.5)	3 (81.2%)
27	4 (95.4%)	3 (82.7%)
28	3 (80.4%)	2 (53.2%)
29	3 (80.3%)	2 (52.2%)
30	2 (63.3%)	4 (97.8%)
31	3 (74.0%)	2 (62.2%)
32	3 (77.5%)	4 (98.5%)
33	2 (57.3%)	4 (95.2%)
34	3 (84.1%)	4 (96.7%)
35	3 (72.5%)	4 (97.5%)
36	3 (76.5%)	4 (95.2%)
37	3 (85.4%)	2 (60.3%)
38	3 (76.9%)	4 (97.2%)
39	3 (72.3%)	4 (97.5%)
40	3 (85.4%)	4 (95.8%)
41	3 (77.1%)	4 (94.2%)
42	4 (90.9%)	4 (93.5%)
43	3 (77.4%)	3 (85.0%)
44	3 (73.6%)	4 (93.0%)
45	3 (75.0%)	4 (98.7%)
46	2 (68.5%)	2 (39.3%)
47	3 (84.1%)	4 (97.8%)
48	3 (76.0%)	4 (93.0%)
49	3 (76.0%)	2 (54.0%)
50	2 (52.3%)	4 (95.8%)

Appendix F (continued)

Table XXXXVII shows the conversion of the alderman's voting percentage to the 2-4 scale used for this research. Table XXXXVIII shows the value of the ward's location in both values. Pearson correlation is used to compare values in Table XXXXII for Sawyer and Daley with their values in Table XXXXVII. The results of the pearson correlation reported in Table XXXXIX and L show that the alternate measure for Sawyer's term is a different measure while the alternate measure for Daley's term is approximately the same as the scale developed for this study.

TABLE XXXXIX - CORRELATION MATRIX OF VALUES USED TO MEASURE THE POLITICAL VALUE OF WARD LOCATION DURING SAWYER'S TERM

	Ward value used for this study scaled 2-4	Alternate values scaled 2-4 based on Table XXXXVII conversion from percentage values	Alternate values expressed as average percentages
Ward values used for this study scaled 2-4		-0.0117 (coeef.) 0.9357 (p-value)	-0.02328 (coeff.) 0.8725 (p-value)
Alternate values scaled 2-4 based on Table XXXXVII conversion from percentage values			0.91644 (coeff.) 0.0001 (p-value)
Alternate values expressed as average percentages.			

TABLE L - CORRELATION MATRIX OF VALUES USED TO MEASURE THE POLITICAL VALUE OF WARD LOCATION DURING DALEY'S TERM

	Ward value used for this study scaled 2-4	Alternate values scaled 2-4 based on Table XXXXVII conversion from percentage values	Alternate values expressed as average percentages
Ward values used for this study scaled 2-4		0.77549 (coeff.) 0.0001 (p-value	0.84455 (coeff.) 0.0001 (p-value)
Alternate values scaled 2-4 based on Table XXXXVII conversion from percentage values			0.95048 (coeff.) 0.0001 (p-value)
Alternate values expressed as average percentages.			

APPENDIX G

ACTORS WHO INFLUENCE THE AGENCY'S CONTRACT DECISIONS

This research measures change in contractor as a function of change in actors who influence the agency's contract decisions. The array of political and bureaucratic actors included in this research provides the foundation for measuring change in contractor influenced by the discretion exercised by elected and appointed officials. The actors identified in this appendix illustrate that the sample of contracting decisions includes a very diverse array of actors so the statistical analysis is not dominated by any one actor or group of actors.

All nine actors have the power to influence the agency's contracting process. The mayor's power to influence the agency's contract decisions is indirect and is based on his/her formal authority to appoint board members and his/her informal power to influence the appointment of the agency's president and other executive staff. The other eight actors can directly influence the agency's contract decisions because of their position with the agency. All eight actors within the agency have nearly absolute control over some discrete segment of the contract decision, because their signature is a required component of the process. In addition, authorization by seven of the eight actors is generally required by the Transit Act, state statute, or procurement policy. The Transit Act and policy empower the chairman, president and vice president to sign contracts. The purchasing agent and contract officer's powers are specified in

APPENDIX G (continued)

purchasing agent and contract officer's powers are specified in procurement policy, while the budget manager and using department manager's powers are specified in the financial policy of the agency, and the powers of the DBE manager are granted via a Transit Board ordinance. Finally, the president and vice president can exercise additional management and oversight powers. The power of each actor is based on different bureaucratic decision rules and operating procedures. Certainly, one would not expect the personal bias of one or two actors to influence any given procurement decision within this matrix or maze of decision making.

In addition to the nine different actors or positions of authority, the array of officeholders also make it appear highly unlikely that individual preferences could sway the final decision. Sixty-five different people have held these offices over the period of the study. The following tables list every person and the period of their influence which is equal to or less than their term in office. The tables illustrate the great amount of change that occurred among the agency's personnel as well as the office of the mayor.

Table LI: Mayors

Name	From Date	To Date
Jane Byrne	4-15-89	4-13-83
Harold Washington	4-14-83	11-26-87
Eugene Sawyer	12-2-87	4-4-89
Richard M. Daley	4-4-89	2-2-9

APPENDIX G (continued)

Table LII: Chairmen		
Name	From Date	To Date
Eugene Barnes	Prior to 1981	4-12-82
Michael Cardilli	4-13-82	8-31-86
Walter Clark	9-1-86	5-28-88
Clark Burris	5-29-88	2-2-92

Table LIII: Presidents (Executive Directors)		
Name	From date	To date
Bob Belcaster	2-3-92	-----
Al Savage	3-31-91	12-12-91
Bernie Ford	1-7-89	4-20-90
Robert Paaswell	9-30-86	1-3-89
Larry Pianto	6-28-85	9-19-86
Bernie Ford	6-14-82	6-25-85
Theodore Schuster	9-24-81	------

APPENDIX G (continued)

Table LIV: Vice President in control of Purchasing (Deputy Directors)		
Name	From date	To date
Craig Lang	9-24-91	12-20-91
Dan Leffers	9-25-90	12-11-91
Gloria Chevere	7-29-87	6-6-90
Dan Perk	3-18-87	6-24-87
Larry Pianto	12-12-86	2-2-87
No one filled Larry Pianto position while he served as Chief Administrative Officer from 6-28-85 to 9-19-86		
Larry Pianto	9-13-82	7-22-85
Paul Kole	7-28-80	7-16-81
Paul Kole held this position for most of the 1970's		

APPENDIX G (continued)

Table LV: Purchasing Agents		
P.A.'s Name	From Date	To Date
Edward Gronkowski	1-16-91	11-6-92
Frank Johnson	5-25-90	12-28-90
Lee Johnson	3-9-90	4-11-90
Zaven Guediguin	6-19-89	2-22-90
Warren Corimer	6-9-88	6-17-89
Bill Roman	2-23-88	5-17-88
Al Martin	5-14-87	12-22-87
Edward Tobin	6-14-82 (note 5)	3-11-87
Larry Pianto	prior to 1982	

Table LVI: Contract Officers		
Name	From Date	To Date
Ed Gronkowski	7-3-85	4-4-88
Al Khan	3-30-83	4-13-89
Ed Ahlbrand	5-13-83	10-19-87
Mike Wisbrod	5-25-83	5-22-84
Rick Hill	5-14-86	9-25-89
Jim Vesely	4-6-83	7-28-89
Bob Knudsen	8-23-82	10-13-87
Eugene Fregetto	11-10-83	10-4-85
Bernie Kozlowski	12-28-82	6-17-87
Jeff Branecki	6-20-84	1-2-90
William Alred	4-6-83	12-30-91
Zaven Guediquin	1-18-83	2-15-88
Chuck Ripke	2-20-89	-----
Parker Hand	12-13-88	1-15-91
Laverne Parr	8-15-88	1-10-91
Bill Drury	5-12-88	10-5-88
Jim Wilson	8-2-89	10-13-89
Rocky Rutledge	5-1-90	10-2-91
Chris Kurczek	5-8-90	6-19-91
William Tell	7-11-90	11-27-91
Edna Southworth	1-5-90	4-16-91

APPENDIX G (continued)

Table LVII: DBE Managers		
Name	From Date	To Date
Pam Beavers	5-15-89	10-8-92
Loyce Ellis	12-28-88	1-18-89
Larry Murphy	3-12-87	11-22-88
DBE Manager did not sign Board Recomm. prior to 1987		

Table LVIII: Manager of the Using Department (Deputy Directors)		
Name	From Date	To Date
Dave Hillock	12-18-87	1-10-92
John Halley	11-11-88	11-23-88
Frank Wilson	3-1-88	9-29-88
George Haenisch	6-24-87	11-13-87
George Millionas	9-20-82	3-3-87
Tom Wolegmuth	6-5-81	11-2-83
Harold Geiseheimer	6-7-81	10-6-82

Table LVIX: Budget Managers		
Name	From date	To date
Nancy Nagel	6-24-87	12-20-91
Jud Lawrie	6-14-82	5-21-87
Budget Manager did not sign board recom. prior to 1981		

NOTES TO THE TABLES

NOTE 1 (All Tables) The time period is based on actual signature dates obtained from the board recommendation or contract, press reports of appointments or electoral records.

NOTE 2 (All Tables) The term in office for seven of the positions are mutually exclusive terms where only one person can exercise the power of that position at any given time. These positions are the mayor, chairman, president, vice president in control of purchasing, purchasing agent with one exception as noted, DBE manager, and budget managers. The other two positions, manager of the using department and contract officers show that several people are exercising the power of those positions simultaneously.

APPENDIX G (continued)

NOTE 3 (Table LV) Edward Tobin was Acting Manager, Materials Management replacing Larry Pianto who was promoted to a Deputy Director (Vice President) of Administration.

NOTE 4 (Table LVI) This is possible, because contracts are assigned to specific contract officers for different using departments and processed simultaneously. This is normal and does not dilute the measurement of change. The exercise of power over a particular contract is mutually exclusive from another actor's contracting decision on a separate contracting event, and Change is measured as the change in an actor making the decision on the current annual order contract for the same item or service.

NOTE 5 (Table LVIII) The requirements under study come from different departments and those departments have been reorganized over time. Consequently, there were a varied set of Managers of the Using Department so the dates for the abovementioned managers would, by the nature of this study, overlap. This overlap of time does not affect the nature of this study, because the study does not track the individual performance of any particular actor, but rather it is the change of actors that is at the core of this study.

APPENDIX H

TYPICAL PROPOSAL PAGE AND CONTRACT AWARD RECOMMENDATION SUMMARY

TYPICAL PROPOSAL PAGE

PROPOSAL
CONTRACT NO. 300753
SPECIFICATION NO. CTA 7269-93

By execution of this proposal the undersigned offers, in accordance with the terms of the Contract Documents of which this Proposal is a part, to furnish and deliver Control Assembly for Wheelchair Lift, FOB Destination, as described in these General and Special Conditions and Detailed Specification No. CTA 7269-93 at the delivered unit prices set forth below.

1. Prices are firms for contract period of 24 months

(note to author: put the other four option here)

Approved part number for lot number 7294407

Mfg. I.D.	Mfg. Part Number
KDS Control	CR-1225
TMC/UCP	G100539-2

CTA lot no. 72994407	Mfg. & Part No.	Unit Price
Control Assembly for Wheelchair lift per Spec. No. 7269-93	_____	$_____

COMPANY BIDDING: _____

PERSON TO CONTACT: _____ PHONE NO._____

TIME REQUIRED FOR DELIVERY: _____

TERMS: DISCOUNT:_____ % _____ DAYS, NET _____DAYS

APPENDIX H (continued)

CONTRACT PROCUREMENT SUMMARY

Requ on No.: 100477
Contract Amount: $50,000.00
Funding: Operating

DESCRIPTION:

High speed steel twist drills to be released as required for a period of twelve (12) months from date of contract.

Specification No. CTA 4081-86

AWARD RECOMMENDED TO:

Rail-Bolt Corp.

PREVIOUS CONTRACTOR:

Don E. Williams Co.

PRICE COMPARISON :

Remarks: Next lowest bidder is 8 % higher than recommended bidder. Previous purchase is 4% Higher than recommended bidder.

Award is recommended to Rail-Bolt Corp. the lowest responsive and responsible bidder. Rail-Bolt is a DBE firm pending certification.

BIDDERS RESPONDING:

Rail-Bolt Corp. - DBE
Mayfair Supply - DBE
Don E. Williams Co.
Enercon Marketing - DBE
Twist Drills & Tools Inc.
Production Dynamics
Reece Tool & Supply

Solicitations: 17
Krivo Industrial Supply - No Bid
Sentry Commercial - No Bid
Creative Lighting Products - No Bid

Proposed DBE subcontractors: DBE participation 100 % of contract Differential Applied ? No

Purchasing E. Gronkowski	E Gronkowski	Date 10/11/91
DBE Program P. Beavers	P Beavers	Date 10/15/91
Operations/Maintenance D. Hillock	D Hillock	Date 10/16/91
General Attorney		Date
Budget N. Nagel	Nancy M Nagel	Date 11/14/91
Finance D. Leffers	D. Leffers	Date 11-15-91
Executive Director A. Savage	A Savage	Date 11/18/91

RR/ag 10-01-91

cta 415.60 (rev. 07/90) Purchase-PS

APPENDIX I

DISTRIBUTION OF INCUMBENTS AND CHALLENGERS AMONG CITY OF CHICAGO'S 50 WARDS.

	WARD 1	WARD 2	WARD 3	WARD 4	WARD 5	WARD 6	WARD 7	WARD 8	WARD 9	WARD 10
NON-DBE FIRM	13	14	3	0	0	0	0	1	22	10
DBE FIRM	8	1	0	1	1	1	0	1	0	0
TOTALS	21	15	3	1	1	1	0	2	22	10

	WARD 11	WARD 12	WARD 13	WARD 14	WARD 15	WARD 16	WARD 17	WARD 18	WARD 19	WARD 20
NON-DBE FIRM	2	13	7	4	4	0	0	0	0	3
DBE FIRM	7	6	0	3	0	0	0	0	1	0
TOTALS	9	79	7	7	4	0	0	0	1	3

	WARD 21	WARD 22	WARD 23	WARD 24	WARD 25	WARD 26	WARD 27	WARD 28	WARD 29	WARD 30
NON-DBE FIRM	0	1	11	2	17	5	20	2	2	14
DBE FIRM	0	4	0	2	0	0	5	2	0	0
TOTALS	0	5	11	4	17	5	25	4	2	14

	WARD 31	WARD 32	WARD 33	WARD 34	WARD 35	WARD 36	WARD 37	WARD 38	WARD 39	WARD 40
NON-DBE FIRM	4	9	0	0	5	3	0	0	2	0
DBE FIRM	0	2	4	1	0	0	0	0	0	0
TOTALS	4	11	4	1	5	3	0	0	2	0

	WARD 41	WARD 42	WARD 43	WARD 44	WARD 45	WARD 46	WARD 47	WARD 48	WARD 49	WARD 50
NON-DBE FIRM	5	29	1	0	1	0	10	0	1	0
DBE FIRMS	0	11	0	0	17	0	0	0	0	0
TOTALS	5	40	1	0	18	0	10	0	1	0

APPENDIX I (continued)

	IN CHICAGO	IN ILLINOIS OUTSIDE CHICAGO	OUTSIDE OF ILLINOIS
NON-DBE FIRM	238	221	189
DBE FIRMS	78	59	7
TOTALS	316	280	196
PERCENT OF TOTAL	39.8%	35.4%	24.8%

	INCUMBENT WINS	CHALLENGER WINS	PERCENT OF TOTAL
LOW-BIDDER	41%	36%	80%
OTHER-THAN-LOW-BIDDER	7%	13%	20%
PERCENT OF THE TOTAL	48%	49%	100%

APPENDIX J

EXPLANATION FOR USING COHESIVENESS MEASURE[15] AS THE PRINCIPAL MEASURE FOR CHANGE OF ACTORS

The three cohesiveness variables are selected to represent change of actors because a pearson correlation shows that the other two measures of change in actors are highly correlated with the cohesiveness measures and the cohesiveness measures should fairly represent the other two measures.

PEARSON COEFFICIENTS FOR COHESIVENESS AND INDIVIDUAL MEASURES OF CHANGE			
	POLITICAL COHESIVENESS (V56)	PURCHASING COHESIVENESS (V57)	MANAGEMENT COHESIVENESS (V63)
V.P. ADM. (V16)	.87938		
USING MGR. (V17)			.67780
DBE MGR. (V18)		.49121	.93983
PUR. AGENT (V19)	.61459	.41393	.56389
CONT. OFF. (V20)			
BUDGET MGR. (V15)	.42963		.65199
MAYOR (V31)		.89856	
PRESIDENT (V14)	.47248		
CHAIRMAN (V30)		.66743	.50097

PEARSON COEFFICIENT BETWEEN COHESIVENESS AND GROUPING MEASURES OF CHANGE			
	V56	V57	V63
POLITICAL ACTORS V40		.91501	.52042
BUREAUCRATS: PURCHASING V47	.91205		
BUREAUCRATS: STAFF V48			.96028
POLITICAL MEDIARIES V41	.81032		.75418
AGENCY BUREAUCRATS V42	.53385		.70408

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[15]I would like to acknowledge the contribution of Ching-Jyuhn Luor for his assistance in the development of the cohesiveness measure. At the time, Ching-Jyuhn Luor was a graduate student at the University of Illinois at Chicago. Presently, he is an Associate Professor of Public Administration at Tamkang University, Taipet, Taiwan.

APPENDIX K

EXPLANATION FOR USING ADMINISTRATIVE TIME MEASURED IN DAYS AS THE PRINCIPAL MEASURE OF ADMINISTRATIVE TIME

This study posited that the length of the administrative review time required to make any particular decision would influence the outcome of that contract decision. Two different methods are used to measure the length of administrative time. The first method used the actual number of days required to make a decision for each of the five phases of the agency's contract decision-making process. The second measurement method used the ratio of days required for each phase to the total number of days for the total contract process.

The measurement of administrative time in days was selected for the final logit analysis for the following two reasons: (1) The original data for this measurement was collected in days and is the best representation of the actual time the agency's bureaucrats required to make the particular contract decision, and (2) the number of days is intuitively easier to understand within the context of this study.

APPENDIX L

DISCUSSION OF ACCEPTED POLICY MODEL HYPOTHESES

FINANCIAL ASPECTS FACTOR: Both variables used to measure the financial aspects factor explain change in contractor.

Annual Sales to the Agency. A positive coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract increases as their total annual sales to the agency increases while successful challengers have low annual sales to the agency. This finding infers that a successful incumbent wins the award of one or more contracts from the agency whereas a successful challenger has little or no previous contracts or sales to the agency. This finding is as hypothesized where increased sales to the agency is expected to give a competitive advantage to the incumbent.

Authorized Contract Expenditure. A positive coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract increases as the authorized contract expenditure increases while the challenger's probability of winning decreases as the contract's dollar-value increases. This infers that incumbent contractors are most successful when competing for the agency's high dollar-value annual-order contracts. This finding is opposed to the hypothesized relationship where it was expected that the large dollar-value

APPENDIX L (continued)

contract would experience the greatest competition and the incumbents would be more likely to lose the subsequent contract solicitation. Also, this finding partially explains why challengers have lower sales to the agency--they are not successful at winning high-dollar-value contracts which would significantly increase their sales to the agency.

LOW-BID POSITION FACTOR: Both factors used to measure the effect of offering the lowest overall price explains change in contractor.

Low-Bidder. A positive coefficient indicates that the incumbent's probability of winning a contract increases if they are the lowest overall bidder while the challenger wins by submitting an other-than-low bid when the lowest overall priced proposal is rejected by the agency. This finding infers that successful incumbents win based on price whereas successful challengers win contracts based on non-price competition. Challengers can win as other-than-low-bidders when the lowest overall bidder is rejected under one of two circumstances: (1) the lowest overall bidder is declared either non-responsive to the bid documents[16], or (2) their bid is rejected because the

[16]See Appendix C for the list of reasons a bid may be declared non-responsive.

APPENDIX L (continued)

agency determined they were not a responsible firm[17]. Either circumstance means the low-overall-bidder was not compliant with the contract requirements and will not be awarded a contract even though they submitted the lowest overall price. This finding is as hypothesized and suggests that incumbents use their past price, technical and performance information as well as their insider knowledge to submit the lowest overall bid. On the other hand, challengers do not enjoy the same advantages; they must find non-price related factors in order to qualify for the contract award and to successfully compete against incumbent contractors.

Percentage-Low-Bid. A positive coefficient indicates that the incumbent's probability of winning a contract increases as the price difference between their bid price and the next lowest bidder increases. This finding means successful incumbents offer prices that are significantly lower than the next lowest bidder. In most cases, the percent difference will be the percent difference between the lowest and second lowest overall bidder because the incumbents generally win as overall bidders. However, the next lowest bidder could be the third or fourth lowest overall bidder, because this percentage measure only the difference between the successful incumbent and the next lowest

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[17]See Appendix C for the list of reasons a bidder may be determined to be not responsible.

APPENDIX L (continued)

bidder. Conversely, challengers are more likely to win the contract when the bidding margins are narrow and they submit an other-than-low overall bid price. This finding is as hypothesized and suggests that successful incumbents use the advantages of insider-knowledge to significantly undercut the prevailing market prices, while challengers, who are not familiar with the agency's requirement or market prices, submit significantly higher prices.

PRICE AND CPI CHANGE FACTOR: All three variables used to measure change in prices explain change in contractor.

Percent Price Change. A positive coefficient indicates that the incumbent's probability of winning a contract increases when the prices between consecutive annual-orders contracts increase. Conversely, challengers are more likely to win an annual-order contract when prices between consecutive annual-order contract prices decrease[18]. This finding indicates that incumbents do not undercut their previous contract prices in order to assure the award of the consecutive annual-order contract. Whereas the challengers experience their greatest success when proposing prices below the incumbent's previous contract price. This finding is opposed to the hypothesized

[18]Reminder: The contract price change variable varies from a minimum of -92% price decrease to a maximum of 99% increase.

APPENDIX L (continued)

relationship which assumed that public knowledge of the incumbent's last contract price and competition would force the incumbent to reduce contract prices in order to assure the award of a subsequent annual-order contract.

Absolute Value of Percent Change Between Annual Order Prices. A negative coefficient indicates that the incumbent's probability of winning a contract is greatest when the absolute difference between contract prices is smallest while challengers are more successful when contract prices increase greatly. At first, this finding appears to contradict the previous finding about percent change in contract prices, but contract price change and the absolute value of contract price change are independent measures of the same phenomenon[19]. Jointly, the actual and absolute measures of contract price change give us two dimensions under which incumbent and challenger are most likely to win contracts. Table 1 summarizes the two dimensions' circumstances.

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[19]The absolute value is an alternate, but not necessarily equal, representation of the data used to measure price change. In accordance with basic mathematical relationship, if the variable's values are all positive, then the actual and absolute value are equal, but if the values have opposite signs, then the actual and absolute values are not equal and provide a different measure using the same data. See Thomas George, Calculus and Analytic Geometry, Addison-Wesley Publishing Company, Inc., Reading, Massachusetts, 1961.

APPENDIX L (continued)

TABLE LX: PRICING STRATEGIES BASED ON PERCENT DIFFERENCE BETWEEN CONSECUTIVE CONTRACT PRICES		
	PERCENT PRICE CHANGE BETWEEN CONSECUTIVE ANNUAL-ORDER CONTRACTS	
CHANGE IN CONTRACTOR	ACTUAL PERCENT DIFFERENCE	ABSOLUTE VALUE OF PERCENT DIFFERENCE
INCUMBENT WINS THE CONSECUTIVE ANNUAL-ORDER CONTRACT	New contract price is higher than the previous contract price	New contract price represents a small increase or decrease in the previous contract price
CHALLENGER WINS AN ANNUAL-ORDER CONTRACT	New contract price is lower than the previous contract price	New contract price represents a large decrease in the previous contract price.

This finding is as hypothesized and suggests that incumbents win by slightly increasing or decreasing contract prices whereas challengers must significantly decrease contract prices in order to win an annual-order contract.

Consumer Price Index. A negative coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract is greatest when the consumer's inflation rate is lowest while the challenger's probability of winning increases during inflationary times. This finding is as hypothesized and infers that incumbents are more successful during stable economic times and challengers are more successful during volatile economic times.

APPENDIX L (continued)

COMPETITION FACTOR: Two of the three variables used to measure the competition factor explain change in contractor.

Firms Solicited. A negative coefficient indicates that incumbents are more likely to win a contract when the agency solicits only a few firms while challengers are more likely to win when the agency solicits more firms.

The number of firms solicited by the agency is a function of four aspects of the particular requirement: (1) the number of firms available in the market who provides the particular product or service, (2) the number of available firms who contacted the agency to express interest in the particular requirement or the commodity, (3) the number of firms known by the agency to be capable of providing the particular product or service, such as, previous bidders, and (4) special requirements that effect the number of firms capable of providing the particular good or service. Regardless of the reason for the solicitation, incumbents' odds of winning a consecutive annual-order contract increase when the agency solicits few firms. Whereas, successful challengers can expect the agency to solicit a maximum number of firms for those annual-order contracts that they have the greatest chance of winning. This finding is as hypothesized and assumed the challenger's probability of success increases as the agency seeks to maximize competition. Whereas, incumbents

APPENDIX L (continued)

face the least competition when they win a consecutive annual-order contract.

Firms Bidding. A negative coefficient indicates that incumbents are more likely to win a contract when fewer firms submit a bid to the agency while challengers are more likely to win as more firms submit a bid to the agency. This relationship is the same as discovered when measuring the number of firms solicited by the agency, and those comments also apply here.

The negative relationship with the two measures of competition explains why incumbents can increase prices or only slightly decrease prices and still win a consecutive annual-order contract: less competition. Less competition could be due to the specialty or complexity of the product or service which limits competition; less competition could be due to the government contracting methods and requirements that cause the less experienced firms to be either discouraged from bidding or disqualified as non-compliant if they submit a bid. In either case, incumbents are more successful when they compete for contracts where they face few competitors while challengers must face the greatest number of competitors in order to win a contract at the agency.

APPENDIX L (continued)

CONTRACTOR'S PRICING TACTICS FACTOR: Only one of the three variables used to measure the contractor's pricing tactics explained change in contractor.

Firm Price. A positive coefficient indicates that the incumbent's probability of winning a contract increases when they submit a firm bid price for the duration of the annual-order while the challenger's probability of winning a contract is increased when they submit an escalated bid price. This finding is as hypothesized and suggests that incumbents use their past price, technical, and performance information as well as other insider knowledge to submit a firm, fixed price for the term of the contract. Conversely, challengers who face greater competition and generally prepare their bid with less information and knowledge than the incumbent, win even though they qualify their bid with an escalated bid price. However, as previously stated, challengers win as other-than-low bidders where price is not the only factor considered when awarding a contract.

APPENDIX M

DISCUSSION OF ACCEPTED SELF-INTEREST MODEL HYPOTHESES

REGIME FACTOR: Neither of the two variables used to measure the influence of a political regime explained change in contractor.

POLITICAL VALUE OF LOCATION FACTOR: The only variable used to measure the political value of location factor explains change in contractor.

Firm's location based on the 1990 Census. A positive coefficient indicates that the incumbent's probability of winning a contract increases when the incumbent is located in a ward whose alderman votes with the mayor. This finding suggests the presence of political influence in the agency's contracting process and identifies political influence as a non-price competitive tactic used by incumbents. Challengers, on the other hand, realize no apparent competitive edge by being located in a ward whose alderman votes with the mayor. Rather the successful challengers tend to be located outside the City of Chicago or the State of Illinois. This finding is as hypothesized and supports the inference that incumbent contractors use the political advantages of location as a competitive advantage to win the agency's annual-order contracts.

CHANGE OF ELECTED AND APPOINTED OFFICIALS FACTOR: None of the three variables used to measure the influence of the elected and

APPENDIX M (continued)

appointed officials explained change in contractor. This finding suggests that change in actors does not influence change in contractor.

ADMINISTRATIVE REVIEW TIME FACTOR: Three of the five variables used to measure the administrative review time explain change in contractor.

Days for pre-bid and bid solicitation. A negative coefficient indicates that the incumbent's probability of contract award decreases as the number of days the agency uses to prepare the requirement for bid and to solicit bids increases. A time delay can be caused for several reasons: budget problems, a conflict over the specifications between purchasing and the using department, review of problems occurring during the previous contract that are expected to impact the new annual-order requirement, addenda and time extensions during the solicitation period needed to correct errors in the solicitation documents, or the need to provide potential bidders more time to prepare their bid proposals. On the other hand, a short pre-bid and bid solicitation phase indicates that there were no budget problems, no changes to the contract requirements from the previously advertised annual-order contract, no controversies over the previous contractor's performance, and no changes or time extensions given during the bid solicitation period. A short

APPENDIX M (continued)

pre-bid and bid solicitation phase indicates the annual-order requirement is repeated with little or no change from the previous year. Consequently, standardized and repetitive annual-order requirements increase the probability that an incumbent contractor will win a consecutive annual-order contract. Whereas challengers are more successful when the requirement is highly scrutinized or delayed, for any reason, to cause the pre-bid and bid solicitation process to be extended. This finding is as hypothesized and suggests the presence of a cozy relationship[20] between incumbents contractors and the public officials who oversee this segment of the agency's contracting process.

Days for Purchasing Agent's Review. A negative coefficient indicates that the incumbent's probability of winning a contract decreases as the time the purchasing agent uses to review the contract recommendation prepared by the contract officer increases. This finding means the purchasing agent readily accepts the recommendation to award the contract to the incumbent contractor, and the purchasing agent is more likely to delay or question the recommendation to award to a challenger. This finding is as hypothesized and suggests the incumbents gain a competitive advantage through their contract performance and/or

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[20]Used in this context, cozy relationship means either the presence of a cozy triangle as described on pages 60-65 or simply a "comfort level" with the incumbent based on the incumbent's past performance and the bureaucrat's reluctance to change or challenge past procurements, i.e, the power of the status quo.

APPENDIX M (continued)

past contact with the elected and appointed officials. All contract recommendations should be reviewed by the purchasing agent in an equal amount of time because these requirement are not complex if the bid solicitation documents are clear, if the contract officer did a fair and impartial review, and if price is the only factor that is used to determine award of contract. Apparently, the purchasing agent's quick review and approval of contract recommendation to incumbent contractor further support the inference that cozy relationships exist between officeholders and incumbent contractors.

Days for Executive Staff and President's Review. A positive coefficient indicates that the incumbent's probability of winning a contract increases as the time the agency's executive staff and president take to review and approve the contract award recommendation increases. This relationship suggests that the agency's executive staff and president are more likely to question a contract recommendation to an incumbent contractor while quickly reviewing and approving contract awards to challenging firms. This relationship opposes the first two relationships and suggests that a check-and-balance system may be an integral part of the agency's contract process--a check-and-balance system in which the purchasing agent scrutinizes a contract award to a challenger while giving a quick approval to

APPENDIX M (continued)

the incumbent and the executive staff and president give a quick review and approval of the challenger's bid while scrutinizing the incumbent's bid. This phenomenon can be interpreted as the agency providing a rigorous review of each contract award regardless of whether each actor scrutinizes it for political reasons or in an effort to seek the lowest cost goods and services. Regardless of the reason for the countervailing reviews, the net result is that all contractors receive an equal but opposition degree of review[21].

CONTRACT JUSTIFICATION FACTOR: Only one of the three variables used to measures the agency's contract justification factor explained change in contractor.

DBE Policy Administration. A negative coefficient indicates that the incumbent's probability of winning a consecutive annual-order contract increases if it is a non-DBE firm[22] while the challenger's probability of winning an annual-order contract increases if it is a DBE firm[23]. This finding

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[21]Coefficient and p-values for the two variables, TDAYS3 and TDAYS4, are approximately equal but opposite, -0.00535 (TDAYS3) with 0.0129 p-value versus +0.00585(TDAYS4) with 0.0196 p-value.

[22]Reminder: The DBE Policy Administration variable is coded "0" for non-DBE firms and "1" for DBE firms.

[23]Note: DBE firm and DBE participation goals established by the agency are not the same measure. The measure included in this study is only whether the successful firm is a DBE firm. We can assume a DBE firm received either 100% participation credit if the DBE firms played a principal role in providing the good or service or received 60% or less credit if they are only a broker. This study investigates DBE participation when DBE firms are prime contractors.

APPENDIX M (continued)

suggests that DBE firms experience the greatest obstacle when trying to win consecutive contracts as incumbents rather than when trying to win first annual-order contracts. Once DBE firms win a first contract, they are less likely than non-DBE firms to win subsequent contract awards.

This finding is as hypothesized and supports the belief that DBE certification gives the challenger a competitive advantage when trying to enter the government market, and DBE certification gives a firm a competitive advantage when bidding against an incumbent contractor. This finding is especially important in light of the time period covered by the study. The 1980's represented a time when the agency's DBE compliance department was establishing itself, increasing their staff and their influence, and a period during which Chicago had a woman and two African-American mayors.

APPENDIX N

SUPPORTING CALCULATIONS FOR TABLE XXXI AND TABLE XXXII IN CHAPTER VI

CALCULATION FOR PERCENT CHANGE INCUMBENT WINS AS REPORTED IN TABLE XXXI, CHAPTER VI

Part 1: Logit $(p)_i$ Analysis: Multivariate Logistic Regression Equation

Coefficient(variable number)
(p-value)

$$\text{Logit } (p)_i = \underset{(.6169)}{-0.6613} + \underset{(.0308)}{0.000707(V7)} + \underset{(.0532)}{0.00128(V28)} + \underset{(.1509)}{0.4326(V9)} + \underset{(.0001)}{0.0395(V10)} + \underset{(.0001)}{0.0474(V24)}$$

$$- \underset{(.0001)}{0.0743(V24A)} - \underset{(.4101)}{0.00393(V33)} - \underset{(.0264)}{0.0536(V11)} - \underset{(.0055)}{0.1698(V13)}$$

$$+ \underset{(.2252)}{0.6466(V61)} + \underset{(.0285)}{0.9572(V27)} - \underset{(.1648)}{0.3227(V38)} + \underset{(.6176)}{0.00219(V52)} - \underset{(.5943)}{0.1330(V6)}$$

$$+ \underset{(.8247)}{0.0966(V58)} + \underset{(.3528)}{0.0670(V5)} - \underset{(.5666)}{0.0274(V56)} + \underset{(.8729)}{0.00765(V57)} - \underset{(.9198)}{0.00498(V63)}$$

$$- \underset{(.0327)}{0.00206(TDAYS1)} - \underset{(.9269)}{0.00016(TDAYS2)} - \underset{(.1766)}{0.00375(TDAYS3)}$$

$$+ \underset{(.1529)}{0.00475(TDAYS4)} - \underset{(.7705)}{0.00022(TDYAS5)} \underset{(.0001)}{-1.1572(V65)} - \underset{(.4865)}{0.1996(V25)} \underset{(.6286)}{-0.00173(V53)}$$

APPENDIX N (continued)

LOGIT (p)$_i$ ANALYSIS: VARIABLES THAT ARE NOT SIGNIFICANT AT THE 0.10 P-VALUE				
(1)	(2)	(3)	(4)	(5)
VARIABLE NAME	VAR. NO.	COEFFICIENT	VARIABLE MEAN	CONTRIBUTION TO LOGIT (p)$_i$: (3)x(4)
Intercept	-----	-0.6613		-0.6613
Low-Bidder	V9	0.4326	0.804	0.3478
CPI	V33	-0.0039	4.7	-0.0185
Bidding:Responding Firms	V61	0.6466	0.798	0.5160
Advantageous Pricing Terms	V38	-0.3227	3.4912*	-1.1266
Percent discount for early invoice payment	V52	0.00219	13.013**	0.0285
presence of a political regime	V6	-0.1330	0.4038***	-0.0537
Power of a political regime	V58	0.0966	0.475973	0.0460
Firm's location	V5	0.0670	3.6987****	0.2478
Political Cohesiveness	V56	-0.0274	4.827985	-0.1323
Purchasing Cohesiveness	V57	0.00765	4.14786	0.0317
Staff Cohesiveness	V63	-0.00498	3.185279	-0.0159
Days for Contract Officer Review	TDAYS2	-0.00016	59.73368	-0.0096
Days for Purchasing Agent Review	TDAYS3	-0.00376	22.59097	-0.0847
Days for Executive Staff and President's Review	TDAYS4	0.00475	22.15817	0.1053
Days for Contract Execution	TDAYS5	-0.00022	51.9243	-0.0114
Remarks: Simple or Complex	V25	-0.1996	0.584184	-0.1166
Contract Justification	V53	-0.00173	41.98601	-0.0726
NET CONTRIBUTION OF NON-SIGNIFICANT VARIABLES TO LOGIT (p)$_i$				-0.9801

* V38 scale is 2,3,4.
** V52=1.3013%.
*** V6, find the 3 outliers, look at frequency printout
**** V5 scale is 2,3,4,5,6.

APPENDIX (continued)

LOGIT $(p)_i$ ANALYSIS: VARIABLES THAT ARE SIGNIFICANT AT 0.10 P-VALUE				
(1)	(2)	(3)	(4)	(5)
VARIABLE NAME	VAR. NO.	COEFFICIENT	VARIABLE MEAN	CONTRIBUTION TO LOGIT $(p)_i$ (3)x(4)
Annual Sales to the Agency	V7	0.00071	258.8921	0.1830
Authorized Expenditure	V28	0.00128	104.2528	0.1334
Percent Low-Bid	V10	0.0395	11.55954	0.4566
Percent Price Change	V24	0.0474	0.142105	0.0067
Absolute Value of Price Change	V24A	-0.0743	808	-0.6538
Firms Solicited	V11	-0.0536	13.27456	-0.7115
Firms Bidding	V13	-0.1698	4.234474	-0.7190
Firm Price	V27	0.9572	2.910579*	0.2786
Days for Pre-bid and Bid Solicitation	TDAYS1	-0.00206	150.8233	-0.3107
DBE Policy Administration	V65	-1.1572	0.181707	-0.2103
NET CONTRIBUTION OF SIGNIFICANT VARIABLES TO LOGIT $(p)_i$ MULTIVARIATE REGRESSION				-1.5470

* V27 binary categories are 2 and 3.

APPENDIX N (continued)

LOGIT $(p)_1$ ANALYSIS: SIGNIFICANT VARIABLES' CONTRIBUTION TO LOGIT $(p)_1$, COEFFICIENT x MINIMUM AND MAXIMUM VARIABLE VALUES.					
(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE NUMBER	COEFFICIENT	MIN. VAR. VALUE	MINIMUM: CONTRIBUTION TO LOGIT $(p)_1$ (2)x(3)	MAX. VAR. VALUE	MAXIMUM: CONTRIBUTION TO LOGIT $(p)_1$ (2)x(5)
V7	0.00071	4.0	0.002828	750.0	0.53025
V28	0.00128	15.0	0.0192	200.0	0.2560
V10	0.0395	1.0	0.0395	22.0	0.890
V24	0.0474	-9.0	-0.4266	9.0	0.4266
V24A	-0.0743	0.0	0.0	15.0	-1.1145
V11	-0.0536	8.0	-0.4288	18.0	-0.9648
V13	-0.1698	1.0	-0.1698	6.0	-1.0188
V27	0.9572	0.0	0.0	1.0	0.9572
TDAYS1	-0.00206	74.0	-0.15244	213.0	-0.4388
V65	-1.1572	0.0	0.0	1.0	-1.1572

APPENDIX N (continued)

$\text{Logit } (p)_{i\ \text{minimum}}$ = + contribution of significant variables + contribution of non-significant variables - contribution of variable under review, (average value) + contribution of variable under review, (minimum value)

LOGIT (p)$_i$ ANALYSIS: FORMULA FOR CALCULATING THE INDIVIDUAL EFFECT OF THE MINIMUM VALUE OF EACH SIGNIFICANT VARIABLE ON THE PROBABILITY OF AN INCUMBENT WINNING A CONSECUTIVE ANNUAL-ORDER CONTRACT.							
VAR. NO	+ (CONTR. OF SIGN. VARS.)	+ (CONTRI. OF NON-SIGN. VARS.)	- (CONTR. OF AVERAGE VALUE OF VAR. UNDER REVIEW)	+ (CONTR. OF MINIMUM VALUE OF VAR. UNDER REVIEW)	LOGIT(p)$_i$	PROBABILITY THAT CHALLENGER WINS THE CONTRACT: $p=e^{\text{logit}(p)_i}/(1+e^{\text{logit}(p)_i})$	PERCENT CHANCE THAT CHALLENGER WINS THE CONTRACT = pX100%.
V7	-1.5470	-0.9801	- (0.1830)	+ (0.00282)	-2.7073	.0667/1.0667=.0625	6.3%
V28	-1.5470	-0.9801	- (0.1334)	+ (0.0192)	-2.6413	.07127/1.07127=.0665	6.7%
V10	-1.5470	-0.9801	- (0.4566)	+ (0.0395)	-2.9442	.05264/1.05264=.0500	5.0%
V24	-1.5470	-0.9801	- (0.0067)	+ (-0.4266)	-2.9604	.05178/1.05178=.0493	4.9%
V24A	-1.5470	-0.9801	- (-0.6538)	+ (0.0)	-1.8733	.15362/1.15362=.1332	13.3%
V11	-1.5470	-0.9801	- (-0.7115)	+ (-0.4288)	-2.2444	.10599/1.10599=.0958	9.6%
V13	-1.5470	-0.9801	- (-0.7190)	+ (-0.1698)	-1.9779	.13836/1.13836=.1215	12.2%
V27	-1.5470	-0.9801	- (0.2786)	+ (0.0)	-2.8060	.0604/1.0604=.5700	5.7%
TDAYS 1	-1.5470	-0.9801	- (-0.3107)	+ (0.15244)	-2.3688	.09359/1.09359=.0856	8.6%
V65	-1.5470	-0.9801	- (-0.2103)	+ (0.0)	-2.3168	.09859/1.09859=.0897	9.0%

APPENDIX N (continued)

$\text{Logit (p)}_{\text{; minimum}}$ = + contribution of significant variables + contribution of non-significant variables - contribution of variable under review, (average value) + contribution of variable under review, (maximum value)

LOGIT (p); ANALYSIS: FORMULA FOR CALCULATING THE INDIVIDUAL EFFECT OF THE MAXIMUM VALUE OF EACH SIGNIFICANT VARIABLE ON THE PROBABILITY OF AN INCUMBENT WINNING A CONSECUTIVE ANNUAL-ORDER CONTRACT.							
VAR. NO	+ (CONTR. OF SIGN. VAR.)	+ (CONTRI. OF NON-SIGN VARS.)	- (CONTR. OF AVERAGE VALUE OF VAR UNDER REVIEW)	+ (CONTR. OF MAXIMUM VALUE OF VAR. UNDER REVIEW)	LOGIT (p);	PROBABILITY THAT CHALLENGER WINS THE CONTRACT: $P=e^{\text{logit(p)}}/(1+e^{\text{logit(p)}})$	PERCENT CHANGE THAT CHALLENGER WINS THE CONTRACT = P x 100%.
V7	-1.5470	-0.9801	- (0.1830)	+ (0.53025)	-2.1799	.11305/1.11305=.1015	10.2%
V28	-1.5470	-0.9801	- (0.1334)	+ (0.2560)	-2.4045	.0903/1.0903=.0828	8.3%
V10	-1.5470	-0.9801	- (0.4566)	+ (0.8690)	-2.1147	.12067/1.12067=.1077	10.8%
V24	-1.5470	-0.9801	- (0.0067)	+ (0.4266)	-2.1072	.1216/1.1216=.1084	10.8%
V24A	-1.5470	-0.9801	- (-0.6538)	+ (-1.1145)	-2.9878	.0504/1.0504=.0480	4.8%
V11	-1.5470	-0.9801	- (-0.7115)	+ (-0.9648)	-2.7804	.0620/1.0620=.0584	5.8%
V13	-1.5470	-0.9801	- (-0.7190)	+ (-1.0188)	-2.8269	.05919/1.05919=.0558	5.6%
V27	-1.5470	-0.9801	- (0.2786)	+ (0.9572)	-1.8485	.15747/1.15747=.1361	13.6%
TDAYS1	-1.5470	-0.9801	- (-0.3107)	+ (-0.4388)	-2.6552	.07028/1.07028=.0657	6.6%
V65	-1.5470	-0.9801	- (-0.2103)	+ (-1.1572)	-3.4740	.03099/1.03099=.0301	3.0%

APPENDIX N (continued)

PROBABILITY OF WINNING AN ANNUAL-ORDER CONTRACT AS REPORTED IN TABLE XXXII

Part 1: Logit$(p)_1$ Analysis: Multivariate Regression Calculations for Scenario A and Scenario B

Coefficient(variable number)
(p-value)

$$\text{Logit}(p)1 = +.000707(V7) + .00128(V28) + .0395(V10) + .0474(V24) - .0743(V24A) - .0536(V11) - .1698(V13)$$
$$(.0308) \quad (.0532) \quad (.0001) \quad (.0001) \quad (.0001) \quad (.0264) \quad (.0055)$$

$$+.9572(V27) - .00206(TDAYS1) - 1.1572(V65) \quad \underline{\text{PLUS}} \text{ CONTRIBUTION OF THE NON-SIGNIFICANT VARIABLES AND THE INTERCEPT}$$
$$(.0285) \quad (.0327) \quad (.0001)$$

LOGIT $(p)_1$ ANALYSIS: SIGNIFICANT VARIABLES' CONTRIBUTION TO LOGIT $(p)_1$, COEFFICIENT x MINIMUM AND MAXIMUM VARIABLE VALUES.					
(1)	(2)	(3)	(4)	(5)	(6)
VARIABLE NUMBER	COEFFICIENT	SCENARIO A VARIABLE VALUE	CONTRIBUTION TO LOGIT $(p)_1$ (2)x(3)	SCENARIO B VARIABLE VALUE	CONTRIBUTION TO LOGIT $(p)_1$ (2)x(5)
NON-SIGN.*			-0.9801		-0.9801
V7	0.000707	750.0	0.53025	4.0	0.002828
V28	0.00128	200.0	0.2560	15.0	0.0192
V10	0.0395	22.0	0.869	1.0	0.0395
V24	0.0474	9.0	0.4266	-9.0	-0.4266
V24A	-0.0743	0.0	0.0	15.0	-1.1145
V11	-0.0536	8.0	-0.4288	18.0	-0.9648
V13	-.1698	1.0	-.1698	6.0	-1.0188
V27	0.9572	1.0	0.9572	0.0	0.0
TDAYS1	-0.00206	75	-0.1545	213	-0.43884
V65	-1.1572	0.0	0.0	1.0	-1.1572
		$\text{LOGIT}(p)_{\text{scenario A}}$	+1.306	$\text{LOGIT}(p)_{\text{scenario}}$	-6.0393

* NON-SIGN. = Total contribution of the non-significant variables including the intercept to the logit$(p)_1$.

APPENDIX N (continued)

CALCULATION FOR SCENARIO A:
High Probability the Challenger Wins the Contract

$p^{scenarioA} = p^{\emptyset maximum}$, where $p^{\emptyset maximum}$ is the maximum probability that an incumbent wins a subsequent annual-order contract.

$$p_{\emptyset maximum} = e^{logit(p)\emptyset maximum}/(1+e^{logit(p)maximum})$$
$$= e^{-1.306}/(1+e^{-1.306}) = 3.691/4.691 = 0.7868$$

$p_{scenarioA} = p_{\emptyset maximum} = .7868$ or 78.68%.

CALCULATION FOR SCENARIO B:
High Probability that Incumbent Wins the Contract

$p_{scenarioB} = 1-p_{\emptyset}$, where $p_{\emptyset minimum}$ is the maximum probability that an incumbent wins the subsequent annual-order contract.

$$p_{\emptyset minimum} = e^{logit(p)\emptyset minimum}/(1+e^{logit(p)minimum})$$
$$= e^{-6.0393}/(1+e^{-6.0393}) = .00238/1.00238 = 0.00238.$$

$p_{scenarioB} = 1 - p_{\emptyset minimum} = 1 - 0.00238 = 0.9976$ or 99.76%.

APPENDIX O

CHAPTER VII TABLES

Table 1, column 2, reports the mean values used to find the contracting events that represent Scenario A and Scenario B, and Column 3 and 4 report which values that were used for each scenario.

TABLE LXI: THRESHOLD VALUES OF THE JOINT PROBABILITY OF 8 VARIABLES USED TO DEFINE THE DIFFERENCE BETWEEN SCENARIO A AND B

VARIABLE NAME AND NUMBER	MEAN VALUE	SCENARIO A: INCUMBENT WINS WHEN THE VARIABLE VALUE IS...	SCENARIO B: CHALLENGER WINS WHEN THE VARIABLE VALUE IS...
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
Annual Sales to Agency (V7)	$250,000	greater than mean value	less than mean value
Authorized Expenditure (V28)	$104,000	greater than mean value	less than mean value
Percent Low Bid (V10)	11.6%	greater than mean value	less than mean value
Percent Price Change (V24)	0.14%	greater than mean value	less than mean value
Firms Solicited (V11)	13 firms	less than mean value	greater than mean value
Firms Bidding (V13)	4.2 firms	less than mean value	greater than mean value
Days for Pre-bid and Bid Solicitation (TDAYS1)	150.8 days	less than mean value	greater than mean value
DBE Policy Administration (V65)	binary variable	equal to 0 or a non-DBE firm	equal to 1 or a DBE firm

APPENDIX O (continued)

TABLE LXII: SCENARIO A: HIGH PROBABILITY THE INCUMBENT WINS A CONSECUTIVE ANNUAL-ORDER CONTRACT						
COMMODITY: SERVICE, REWINDING OR REBUILD ELECTRIC MOTORS (SIC 7694, SIC 3621, SIC 3699)						
CONTRACT NUMBER	000537	900537	700537A*	700537B*	600537A*	600537B*
ANNUAL SALES TO THE FIRM (V7)	$500,000	$464,000	$330,000	$17,000	$85,000	$85,000
AUTHORIZED EXPENDITURE (V28)	$450,000	$291,000	$596,000	$435,000	$596,000	$445,000
PERCENT LOW BID (V10)	N/A	N/A	35%	N/A	1%	N/A
PERCENT PRICE CHANGE (V24)	4%	22%	34%	80%	-5%	N/A
ABSOLUTE VALUE OF PERCENT PRICE CHANGE (V24A)	4%	22%	34%	80%	5%	N/A
FIRMS SOLICITED (V11)	10 firms	10 firms	4 firms	4 firms	5 firms	5 firms
FIRMS BIDDING (V13)	2 firms	1 firms	2* firms	2* firms	4** firms	4** firms
FIRM OR ESCALATED PRICE (V27)	firm price	firm price	firm price	firm price	firm price	firm price
PRE-BID AND BID SOLICITATION TIME (TDAYS1)	154	184	132	132	284	284
DBE POLICY ADMINISTRATION	non-DBE	non-DBE	non-DBE	non-DBE	non-DBE	non-DBE
CHANGE IN CONTRACTOR (V8)	incumbent wins	incumbent wins	incumbent wins	incumbent wins	incumbent wins	challenger wins**
NAME OF WINNING CONTRACTOR	Calumet	Calumet	Calumet	Everson	Calumet	Everson

* Contracts 700537 and 600537 were split between two contractors
** Contract 500537 was awarded to one firm, Calumet.

APPENDIX O (continued)

TABLE LXIII: SCENARIO A: HIGH PROBABILITY THAT INCUMBENT WINS A CONSECUTIVE ANNUAL-ORDER CONTRACT							
COMMODITY: SHEET ALUMINUM (SIC 5051)							
CONTRACT NUMBER	100222	000222	800222	700222	600222	500222	400222
ANNUAL SALES TO THE FIRM (V7)	$124,000	$171,000	$290,000	$205,000	$147,000	$12,000	$106,000
AUTHORIZED EXPENDITURE (V28)	$250,000	$100,000	$250,000	$150,000	$48,000	$60,000	$70,000
PERCENT LOW BID (V10)	4%	10%	12%	34%	20%	7%	5%
PERCENT PRICE CHANGE (V24)	2%	-8%	21%	28%	17%	-29%	-7%
ABSOLUTE VALUE OF PERCENT PRICE CHANGE (V24A)	2%	8%	21%	28%	17%	29%	7%
FIRMS SOLICITED (V11)	12 firms	5 firms	12 firms	10 firms	9 firms	9 firms	10 firms
FIRMS BIDDING (V13)	3 firms	2 firms	2 firms	2 firms	3 firms	3 firms	2 firms
FIRM OR ESCALATED PRICE (V27)	firm price	escalated	escalated	escalated	escalated	escalated	escalated
PRE-BID AND BID SOLICITATION TIME (TDAYS1)	98 days	70 days	132 days	381 days	99 days	117 days	46 days
DBE POLICY ADMINISTRATION	DBE	non-DBE	non-DBE	non-DBE	non-DBE	DBE	non-DBE
CHANGE IN CONTRACTOR (V8)	challenger wins	incumbent wins	incumbent wins	incumbent wins	challenger wins	challenger wins	incumbent wins (?)
NAME OF WINNING CONTRACTOR	Mets	Castle	Castle	Castle	Castle	Samson	Castle

APPENDIX O (continued)

TABLE LXIV: SCENARIO B: HIGH PROBABILITY CHALLENGER WINS AN ANNUAL-ORDER CONTRACT				
COMMODITY: GLASS CLEANER (SIC 5087-48 AND SIC 5087-24)				
CONTRACT NUMBER	100342	000342	900342	800342
ANNUAL SALES TO THE FIRM (V7)	0	0	118,000	62,000
AUTHORIZED EXPENDITURE (V28)	25,000	20,000	20,000	20,000
PERCENT LOW BID (V10)	3	-2	1	8
PERCENT PRICE CHANGE (V24)	-6	-7	1	8
ABSOLUTE VALUE OF PERCENT PRICE CHANGE (V24A)	6	7	1	8
FIRMS SOLICITED (V11)	15	19	15	19
FIRMS BIDDING (V13)	5	7	14	6
FIRM OR ESCALATED PRICE (V27)	firm price	firm price	firm price	firm price
PRE-BID AND BID SOLICITATION TIME (TDAYS1)	126	175	100	78
DBE POLICY ADMINISTRATION	DBE	DBE	DBE	DBE
CHANGE IN CONTRACTOR (V8)	incumbent wins	challenger wins	challenger wins	challenger wins
NAME OF WINNING CONTRACTOR	Creative Lighting	Creative Lighting	Chicago United	American

APPENDIX O (continued)

TABLE LXV: SCENARIO B: HIGH PROBABILITY CHALLENGER WINS AN ANNUAL-ORDER CONTRACT			
COMMODITY: HIGH SPEED TWIST DRILLS (SIC 3423, SIC 3429, SIC 3545, SIC 3546)			
CONTRACT NUMBER	100477	000477	900477
ANNUAL SALES TO THE FIRM (V7)	$0	$67,000	$175,000
AUTHORIZED EXPENDITURE (V28)	$50,000	$50,000	$50,000
PERCENT LOW BID (V10)	8%	5%	N/A
PERCENT PRICE CHANGE (V24)	-4%	-1%	2%
ABSOLUTE VALUE OF PERCENT PRICE CHANGE (V24A)	4%	1%	2%
FIRMS SOLICITED (V11)	17 firms	16 firms	11 firms
FIRMS BIDDING (V13)	7 firms	8 firms	1 firms
FIRM OR ESCALATED PRICE (V27)	firm price	firm price	firm price
PRE-BID AND BID SOLICITATION TIME (TDAYS1)	174 days	128 days	144 days
DBE POLICY ADMINISTRATION	DBE	non-DBE	non-DBE
CHANGE IN CONTRACTOR (V8)	challenger wins	incumbent wins	incumbent wins
NAME OF WINNING CONTRACTOR	Rail-Bolt	Williams	Williams

APPENDIX O (continued)

TABLE LXVI: AVERAGE DIFFERENCE BETWEEN SCENARIO A & B ANNUAL-ORDER CONTRACTS				
CRITERIA	SCENARIO A: ACTUAL CONTRACTS	SCENARIO B: ACTUAL CONTRACTS	DIFFERENCE BETWEEN ACTUAL CASES	DIFFERENCE BETWEEN SCENARIO AS ORIGINALLY MODELED
column 1	column 2	column 3	column 4	column 5
Annual Sales to the Agency	$195,000	$60,000	$135,000	$746,000
Authorized Expenditures	$287,770	$33,570	$254,200	$185,000
Percentage Low-Bidder	14.2%	3.8%	10.4%	21%
Percent Price Change	18.9%	-1.0%	17.9%	18%
ABS(percent price change)	21.4%	4.1%	17.3%	15%
Firms Solicited	8.0 firms	16.0 firms	8 firms	10 firms
Firms Bidding	2.5 firms	7.0 firms	4.5 firms	5 firms
Firm Bid Price:Escalated Bid Price	7/6	7/0	*	*
Days for Pre-Bid and Bid Solicitation	162.5 days	132.1 days	30.4 days	139 days
Non-DBE Firm:DBE firm (%)	11/13 (85%)	2/7 (29%)	56%	N/A
Incumbent wins:Challenger Wins (%)	9/13 (70%)	3/7 (43%)	27%	21%

* Actual contracting events confirm that successful incumbents are more likely to propose escalated prices.

Table LXVI - The difference between the authorized expenditure for the two scenarios is separated by $254,200 in the actual cases, whereas the difference is $185,000 in the General Research Model. Likewise, percent price change for the actual contracts is separated by 19.9% versus 18%; the absolute value of percent price change is separated by 17.3% versus 15%. Table LXVI shows the average value of 13 annual-order contracts that represent Scenario A (column 2), the average value for the 7 annual-order contracts that represent Scenario B (column 3), the difference between these averages (column 4), and the difference between the values of the two scenarios modeled in Chapter VI, Table XXXII (column 5).

APPENDIX O (continued)

TABLE LXVII: COMPETITION FOR ANNUAL-ORDER COMMODITIES			
COMMODITY	SIC	TOTAL FIRMS IN THE U.S.	TOTAL FIRMS IN ILLINOIS
GLASS CLEANER	5087.48 - window cleaning equipment and supplies	123	12
	5087-24 - janitor's supplies	7,311	306
HIGH SPEED TWIST DRILLS	3423 - hand & edge tools	1,731	101
	3429 - Hardware	2,627	166
	3545 - cutting tools and machines tool accessories	2,210	109
	3546 - power driven hand tools	431	27
SHEET ALUMINUM	5051 - metals service centers and offices	636	38
REWINDING OR REBUILD ELECTRIC ARMATURE MOTORS	7694 - armature rewinding shops	167	12
	3621 - motors and generators	1,627	161
	3699 - electric equipment and supplies, not elsewhere classified	3,233	94

APPENDIX O (continued)

TABLE LXVIII: NON-DBE FIRMS WHO ARE GENERALLY SUCCESSFUL INCUMBENTS[24]

COMPANY	START DATE	SALES	NUMBER OF ACCOUNTS	EMPLOYEES		TERRITORY	FACILITY	OWNERSHIP	TYPE OF BUSINESS (SIC)
				IN CHICAGO	TOTAL				
A.M.Castle	1890	$536,568,000	30,000	378	1,256	United States and Canada	1-bldg, 533,600 sq. ft.	public	Metals service centers distributing ferrous and non-ferrous semi-finished metals.
Calumet Armature & Electric Co.	1956	$6,550,684	75	54	77	United States & Canada	1-bldg., 33,000 sq. ft.	private, four owners	Repairs and rebuilds electric motors and manufacturers electric motor components.
Everson Electric Co.	1921	$11,317,449	150	110	140	Interna-tional	3-bldgs., 60,000, 20,000 & 20,000 sq. ft.	private, two owners	Manufactures electrical apparatus, AC and DC electrical motors and magnets for super conducting and high energy industries.
Don E. Williams	1940	$30,000,000	2,000	46	79	Iowa, Illinois, Wisconsin & Eastern Nebraska	1-bldg., 33,400 sq. ft.	ESOP	Wholesales industrial supplies specializing in industrial tools

[24]Information of the firm is obtained from D&B Reports, 1995.

APPENDIX O (continued)

TABLE LXIX: DBE FIRMS WHO ARE GENERALLY SUCCESSFUL CHALLENGERS (information obtained from D&B Reprots, 1995.)

COMPANY	START DATE	SALES	NUMBER OF ACCOUNTS	EMPLOYEES		TERRITORY	FACILITY	OWNERSHIP	TYPE OF BUSINESS (SIC)
				IN CHICAGO	TOTAL				
Creative Lighting Products	1974	$3,000,000	225	4	4	California, Dallas TX, Indiana, Illinois, Memphis TN	one bldg., 1,200 sq. ft., plus warehouse	private, one owner	Wholesales industrial machinery & equipment, specializing in engines or transportation equipment. Wholesales electrical & equipment, including but not limited to air conditioning appliances, air compressors, and lighting fixtures.
Rail-Bolt Corporation	1984	out-of-business	n/a	7	7	n/a	n/a	private	Wholesale supplier for railroad industry.
American Heritage Supplies	1987	$750,000	800	7	7	Illinois, Indiana, Wisconsin	one bldg., 4,000 sq. ft.	private, one owner	Wholesales janitorial cleaning supplies and paper goods
Chicago United Industries	1986	$10,000,000	20	6	6	Illinois, government accounts	one bldg., 2,000 sq. ft.	private, two owners	Distribution of industrial and construction supplies, distributor of motor fuel, suppliers of natural gases & operate as a business consultant
METS, Inc.	1980	$2,500,000	60	3	25	midwest United States	1-bldg., 30,000 sq. ft.	private, one owner	Wholesales industrial equipment, operates a job machine shop, wholesales steel and fasteners
Samson Interna-tional,	1978	OPERATIONS WENT OUT-OF-BUSINESS IN 1987.							

APPENDIX O (continued)

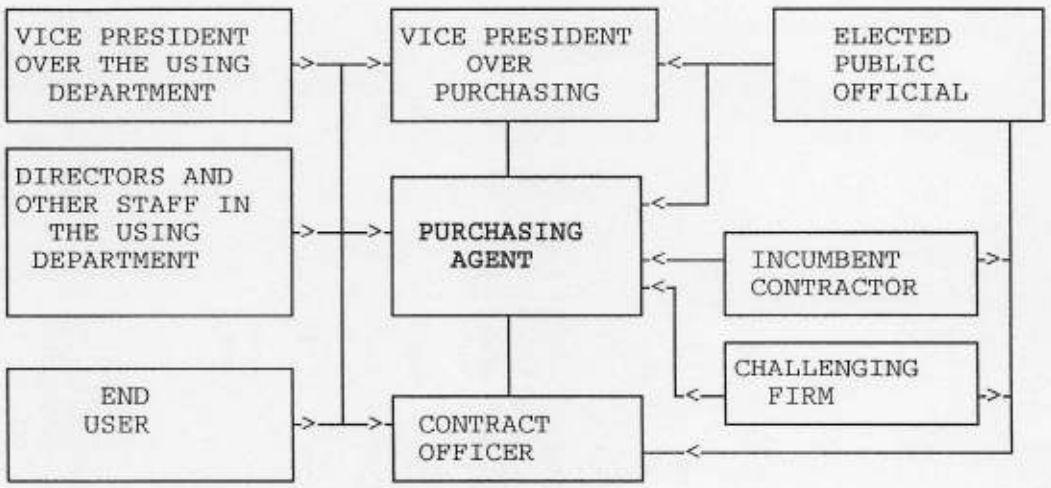
Public Officials Who Oversee and Implement the Agency's Contracting Process

There is a high degree of oversight that is present within the agency's process. Table (AA) identifies twenty-two different people who share the responsibility for the agency's contracting process during at least one stage. Four of the twenty-two people formally review each annual-order requirement at least twice. The table also provides a brief discussion of their tasks and responsibilities for each stage. These twenty-two people do not include any federal, state, or CTA auditors, CTA accounts payable personnel, CTA field administration personnel with contract oversight responsibility, competing firms, or other persons, such as media reporters, who obtain contract documents through the freedom of information requests or through informal requests. With this high degree of oversight, it is seemingly impossible that any public official could influence the agency's contracting process. However, the subsequent discussion of the selected contracts and the set of contiguous annual-order contracts will illustrate how some degree of influence is possible and the ability of those discretionary decisions to influence the agency's contract decisions.

Table LXX identifies the key person or persons who have the principal responsibility for making contract decisions during a

APPENDIX O (continued)

particular stage. The identification of the person responsible for each stage does not imply that no other public officials will influence the agency's contract decisions during that particular stage. In fact, the opinions of other public officials as well as private individuals are likely to attempt to influence the responsible public officials discretionary decisions. Following is a diagram of the people who may influence the purchasing agent's contract decisions. Similar diagrams can be drawn for each of the nine agency actors.



Even though seven people may influence the purchasing agent's contract decision, the purchasing agent is solely accountable for his or her decision as are the rest of the agency actors identified in this study.

APPENDIX O (continued)

TABLE LXX: PUBLIC OFFICIALS RESPONSIBLE FOR OVERSIGHT OF THE AGENCY'S CONTRACTING PROCESS	
PUBLIC OFFICIAL	PUBLIC OFFICIAL'S TASKS AND RESPONSIBILITIES
Order Control Clerk	Initiates a requisition for a subsequent annual-order contract and gives it to the Manager of Stores to establish the dollar value.
Manager of Stores	Reviews the previous year's usages and establishes a value for the requirement.
Director of Purchasing	Reviews the nature of the requirement and assigns it to a Contract Officer.
Contract Officer	Four principal tasks: review previous contract file, reviews and updates specification, selects firms for bidders' list, and prepares documents for public bidding.
Order Control Clerk	Routes requisition to Vice President over Purchasing for review and approval.
Vice President over Purchasing	Reviews the contract solicitation documents and approves for advertising.
Contract Officer	Answers all questions during bid solicitation period, chairs any pre-bid meetings, and issues all addenda.
Bid Committee consisting of Law, Purchasing, and CTA Board Secretary	The Bid Committee open all bids publicly, read the bid prices, and are witnesses to the event. Bid documents are available for inspection and any exceptions are noted by the legal and purchasing staff.
Contract Officer	Reviews all bid documents, summarizes the results, requests review of the bidders' DBE participation, and prepares the contract recommendation based on his or her findings.
DBE Manager	Reviews the bidders' DBE participation and reports their findings to the Contract Officer.
Director of Purchasing	Reviews and approves the Contract Officer's recommendation.
Purchasing Agent	Reviews the contract recommendation of the contract officer and considers information that may come from other sources.
Manager of the Using Department	Reviews and approves the contract recommendation as to need and dollar-value.
Finance Manager	Reviews and approves the contract recommendation as to approved budget.
Vice President over Purchasing	The fourth level of Purchasing's review and approval.

APPENDIX O (continued)

TABLE LXX: PUBLIC OFFICIALS RESPONSIBLE FOR OVERSIGHT OF THE AGENCY'S CONTRACTING PROCESS (continued)

PUBLIC OFFICIAL	PUBLIC OFFICIAL'S TASKS AND RESPONSIBILITIES
President	The final administrative review and approval before presentation to the Transit Board for their approval
CTA attorney	Reviews and approves for legal form.
Transit Board	The seven member board reviews and approves the contract recommendation.
Chairman of the Transit Board	Reviews and signs the contract after the Transit Board's approval.

APPENDIX P

FULL TEXT OF CONTRACT RECOMMENDATION REMARKS SECTION TO SUPPORT TABLE XXXIII

These are the contract recommendation remarks for the two annual-order series in which the incumbent is most likely to win the award of the consecutive annual-order.

High Speed Steel Twist Drills (477)

100477
Award is recommended to Rail-Bolt Corporation the lowest responsive and responsible bidder. Rail-Bolt is a DBE firm pending certification.

000477
The three lowest bidders were not in compliance with the DBE goals. The fourth lowest bidder was a DBE firm and quoted prices 11% higher than Don E. Williams Co.. Don E. Williams Co. is therefore recommended for contract award.

900477
The prices quoted by Don E. Williams Company are 2% higher than the prices paid on last year's contract. Don E. Williams Company failed to comply with the DBE goal established for this project. Other bidders were contracted as to why they did not submit a bid for this requirement. Production Supplies indicated they were unable to prepare their bid in time to meet the bid opening date. Chicago Hi-Speed Tool & Supply and Bosler Supply indicated they were unable to quote at this time.

Glass Cleaner (342)

100342
Chicago United Industries, Ltd. offered a lower price by 0.9% but failed to meet the DBE goal.

000342
Creative Lighting Products is a DBE firm that is not certified to sell this commodity and therefore did not meet the established DBE goal for this contract. The DBE compliant bidder is Root Bros. Supply with 30% participation, however, since their price is 24.9% more than Creative Lighting's bid, the award is recommended to Creative Lighting. The bid submitted by Mayfair Supply Col. should not have been evaluated by the DBE Department since it was a non-responsive bid to an improper signature.

APPENDIX P (continued)

900342
The first low bidder does not comply with the CTA DBE goals. Second low bidder's prices are 7.3% higher. Comparison to fourth bidder. Chicago United and American Heritage submitted tie bids. Chicago United offered better delivery terms and American Heritage conditioned their bid by including a minimum order quantity.

800342
American Heritage Supplies, Ltd. submitted the lowest responsive bid, offering prices approximately 7.57% below those of the next lowest bidder, Production Dynamics was 8.2% above the prices paid on the last under-money purchase order. A bid which was 2.13% lower than American Heritage Supplies, Ltd. was submitted by Riddiford Bros. Inc., however, that firm did not comply with the DBE goals established for this contract. American Heritage Supplies, Ltd. fully complies with the DBE goals.

These are the contract recommendation remarks for the two annual-order series in which the challenger is most likely to win the award of an annual-order.

100222
(There are no statements in the "remarks" portion of the contract procurement summary.)

000222
J.T. Ryerson & Son, Inc. has in its stock a particular size and sheet aluminum that A.M. Castle has to special order. Ryerson quoted a price of $21.29 per sheet versus $195.20 per sheet from Castle. This one item accounts for the large average percentage of price difference between "B" Contract prices, and also accounts for the difference between current and previous contract prices.

800222
Prices quoted by A.M. Castle & Co., Inc. average 11.47% less than those quoted by R.T. Ryerson & Son, Inc. and average 20.75% greater than prices paid under the previous contract. Iron Age

Magazine, a metals publication which tracks prices changes in the ferrous and non-ferrous metals markets indicates that the per pound price of aluminum increased from $0.82 in February of 1988 (when the previous contract was quoted) to $1.10 in September 1988. This represents a 34% price increase. A.M. Castle has complied with contract DBE requirements by acquiring 5% DBE

APPENDIX P (continued)

700222
A.M. Castle Co. submitted the lowest bid; their bid is approximately 34.0% lower than the next lowest bidder and approximately 27.5% higher than the last year's prices. The sharp increase over last year's prices is due to a very strong consumer demand for aluminum coupled with decreased foreign aluminum imports due to the weakness of the American dollar against foreign currency.

600222
Castle Metals' average bid price is approximately 20% lower than the second lowest bidder and 17% higher than the last year's contract prices. The bid difference in prices from last year's contract is due to the influx of foreign competition and decrease demand for these types of alloys.

500222
Samson International, Inc. bid prices average approximately 7% lower than the next lowest bidder and approximately 29% lower than last year's contract. The big difference in prices from last year's contract is due to the influx of foreign competition and decreased demand.

400222
Approximately 5% below the next lowest bid. Approximately 7% below price paid under individual requisition for the 13 items under this requirement.

537 - REWINDING MOTORS

000537
Sievert Electric Service and Sales Company is not an approved source for rewinding CTA rail car traction motor armatures.

The recommended bidder, Calumet Armature, was found to be in compliance with bid document DBE requirements by obtaining 18% DBE participation and submitting good faith efforts documentation.

900537
Calumet Armature stated that in the two years since their previous quotation to CTA for the subject type of work, copper prices have fluctuated wildly, increasing as much as 84% over the price in effect when the previous contract was quoted. Calumet has also experience a 9% labor rate increase over the last two years. Other approved bidders did not quote this requirement due to their feelings of non-competitiveness.

APPENDIX P (continued)

700537
Two bids were received for this service. Calumet Armature & Electric company submitted the lowest bid prices. These prices are approximately 33.5% greater than the prices paid to Calumet under last year's contract.

Everson Electric, the second lowest bidder, submitted bid prices approximately 35.2% greater than the prices bid by Calumet Armature & Electric company and approximately 80.4% greater than the prices paid under last year's contract.

A portion of this price increase can be attributed to an industry-wide increase in the cost of copper.

Calumet Armature & Electric Company has recently experienced some difficulties in supply the Authority with Armatures as specified. On or about November 3, 1987, Calumet Armature experienced a breakdown of their vacuum pressure impregnation system, (V.P.I.). Calumet failed to inform the Authority until December 14, 1987, during which time several armatures were processed without the V.P.I. treatment. These armatures were treated by a triple-dip and bake process which is considered an extremely good process and was used extensively prior to development of the V.P.I. system.

Calumet Armature has formally apologized for this lack of communication (copy of their letter attached). They have purchased and installed a new V.P.I. tank which is currently in use. Furthermore, Calumet has indicated that they will fully warrant the armatures that were not subjected to the V.P.I. process for a full two year period in order to show good faith in backing up their deviation. The standard warranty is for one year.

The Authority will keep Calumet Armature under close scrutiny to insure performance in accordance with CTA specifications.

Since this contract provides for rebuilding of traction motor armatures, it is imperative that the Authority insure a constant source for this service. For this reason, both an "A" and "B" contract will be awarded, allowing the Authority to release a portion of this work to Everson Electric Company in the event that Calumet Armature & electric Company cannot handle the work load.

APPENDIX P (continued)

600537

Primary Contract

Prices quoted by Calumet Armature & Electric Company are 0.54% less than the second lowest bid and 4.5% less than current contract prices.

Secondary Contract

Because of the critical need to have an uninterrupted supply of repaired traction motor armatures, we propose to issue a secondary contract for rewinding armatures to Everson Electric Company, the second lowest bidder. It is felt that an extremely severe winter can tax even the most reliable motor repair shop's ability to keep up with motor repair demand. The "Secondary Contract" will allow the Authority to quickly and efficiently transfer whatever portion of it's traction motor repair requirement necessary to Everson Electric, thereby helping to minimize the possibility of experiencing a shortage of traction motor armatures.

Calumet Armature & Electric company and Everson Electric Company have satisfied Affirmative Action requirements with regard to DBE and WBE participation.

Prices are firm for the contract period.

APPENDIX Q

SAS OUTPUT STATEMENTS FOR ALL LOGIT ANALYSES

BOTH MODELS AS OF NOVEMBER 1, 1995
The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	683.423	.
SC	812.929	805.732	.
-2 LOG L	806.560	627.423	179.137 with 27 DF (p=0.0001)
Score	.	.	146.061 with 27 DF (p=0.0001)

RSquare = 0.2645 Max-rescaled RSquare = 0.3531

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-13.2867	7.9398	2.8004	0.0942	.	.
V7	1	0.000707	0.000327	4.6632	0.0308	0.133654	1.001
V28	1	0.00128	0.000662	3.7391	0.0532	0.111833	1.001
V9	1	0.4326	0.3012	2.0627	0.1509	0.093392	1.541
V10	1	0.0395	0.00935	17.8227	0.0001	0.313607	1.040
V24	1	0.0474	0.0105	20.2855	0.0001	0.366641	1.049
V24A	1	-0.0743	0.0139	28.6158	0.0001	-0.455390	0.928
V33	1	-0.00393	0.00477	0.6786	0.4101	-0.060575	0.996
V11	1	-0.0536	0.0242	4.9300	0.0264	-0.142957	0.948
V13	1	-0.1698	0.0612	7.7064	0.0055	-0.210603	0.844
V61	1	0.6466	0.5332	1.4709	0.2252	0.075063	1.909
V27	1	0.9572	0.4369	4.7990	0.0285	0.147897	2.604
V38	1	-0.3227	0.2323	1.9295	0.1648	-0.100990	0.724
V52	1	0.00219	0.00439	0.2492	0.6176	0.031442	1.002
V6	1	-0.1330	0.2497	0.2837	0.5943	-0.035698	0.875
V58	1	0.0966	0.4359	0.0491	0.8247	0.014803	1.101
V5	1	0.0670	0.0721	0.8635	0.3528	0.055605	1.069
V56	1	-0.0274	0.0478	0.3284	0.5666	-0.038527	0.973
V57	1	0.00765	0.0478	0.0256	0.8729	0.010700	1.008
V63	1	-0.00498	0.0495	0.0101	0.9198	-0.007178	0.995
TDAYS1	1	-0.00206	0.000966	4.5630	0.0327	-0.149269	0.998
TDAYS2	1	-0.00016	0.00170	0.0084	0.9269	-0.006536	1.000
TDAYS3	1	-0.00375	0.00278	1.8256	0.1766	-0.137472	0.996
TDAYS4	1	0.00475	0.00333	2.0428	0.1529	0.141214	1.005
TDAYS5	1	-0.00022	0.000764	0.0851	0.7705	-0.019398	1.000
V65	1	-1.1572	0.3021	14.6713	0.0001	-0.250693	0.314
V25	1	-0.1996	0.2868	0.4842	0.4865	-0.053291	0.819
V53	1	-0.00173	0.00358	0.2340	0.6286	-0.037278	0.998

Association of Predicted Probabilities and Observed Responses

Concordant = 80.3%	Somers' D = 0.609
Discordant = 19.5%	Gamma = 0.610
Tied = 0.2%	Tau-a = 0.304
(84732 pairs)	c = 0.804

APPENDIX Q (continued)

POLICY MODEL AS OF NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 649
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	308
2	1	341

WARNING: 171 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	900.026	764.460	.
SC	904.502	827.116	.
-2 LOG L	898.026	736.460	161.566 with 13 DF (p=0.0001)
Score	.	.	132.116 with 13 DF (p=0.0001)

RSquare = 0.2204 Max-rescaled RSquare = 0.2941

POLICY MODEL AS OF NOVEMBER 1, 1995
Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-12.2306	6.7690	3.2647	0.0708	.	.
V7	1	0.000747	0.000289	6.6992	0.0096	0.140540	1.001
V28	1	0.00154	0.000608	6.4237	0.0113	0.133628	1.002
V9	1	0.7904	0.2486	10.1102	0.0015	0.168749	2.204
V10	1	0.0408	0.00840	23.5549	0.0001	0.328815	1.042
V24	1	0.0431	0.00903	22.8182	0.0001	0.332151	1.044
V24A	1	-0.0695	0.0118	34.6431	0.0001	-0.421419	0.933
V33	1	-0.00623	0.00343	3.3011	0.0692	-0.096442	0.994
V11	1	-0.0526	0.0215	5.9640	0.0146	-0.141793	0.949
V13	1	-0.1846	0.0544	11.5118	0.0007	-0.224914	0.831
V61	1	0.6222	0.4832	1.6582	0.1978	0.070693	1.863
V27	1	0.8806	0.3832	5.2823	0.0215	0.140741	2.412
V38	1	-0.2748	0.2088	1.7318	0.1882	-0.086703	0.760
V52	1	0.000805	0.00396	0.0413	0.8389	0.011182	1.001

Association of Predicted Probabilities and Observed Responses

Concordant = 76.8%	Somers' D = 0.538
Discordant = 23.0%	Gamma = 0.539
Tied = 0.2%	Tau-a = 0.269
(105028 pairs)	c = 0.769

APPENDIX Q (continued)

SELF-INTEREST MODEL NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in Contractor, 0 = incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 689
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	335
2	1	354

WARNING: 131 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	956.633	918.804	.
SC	961.168	986.833	.
-2 LOG L	954.633	888.804	65.828 with 14 DF (p=0.0001)
Score	.	.	58.296 with 14 DF (p=0.0001)

RSquare = 0.0911 Max-rescaled RSquare = 0.1215

SELF-INTEREST MODEL NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-1.2346	1.2089	1.0429	0.3071	.	.
V6	1	-0.0688	0.1953	0.1241	0.7246	-0.018866	0.934
V58	1	-0.3149	0.3437	0.8394	0.3596	-0.048680	0.730
V5	1	0.0972	0.0546	3.1653	0.0752	0.081138	1.102
V56	1	-0.00992	0.0349	0.0807	0.7764	-0.013897	0.990
V57	1	0.0133	0.0362	0.1350	0.7133	0.018542	1.013
V63	1	-0.00973	0.0392	0.0617	0.8038	-0.014138	0.990
TDAYS1	1	-0.00172	0.000717	5.7391	0.0166	-0.123158	0.998
TDAYS2	1	0.000443	0.000974	0.2068	0.6493	0.024781	1.000
TDAYS3	1	-0.00535	0.00215	6.1782	0.0129	-0.202081	0.995
TDAYS4	1	0.00585	0.00251	5.4438	0.0196	0.313195	1.006
TDAYS5	1	-0.00031	0.000558	0.3078	0.5790	-0.030656	1.000
V65	1	-1.4519	0.2407	36.3769	0.0001	-0.309664	0.234
V25	1	-0.2259	0.2187	1.0666	0.3017	-0.061371	0.798
V53	1	-0.00282	0.00266	1.1253	0.2888	-0.063965	0.997

Association of Predicted Probabilities and Observed Responses

Concordant = 66.3%	Somers' D = 0.330
Discordant = 33.2%	Gamma = 0.332
Tied = 0.5%	Tau-a = 0.165
(118590 pairs)	c = 0.665

APPENDIX Q (continued)

BYRNE REGIME, NOVEMBER 1, 1995

Data Set: WORK.REGIME1
Change in Contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 81
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	49
2	1	32

WARNING: 77 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	110.695	105.767	.
SC	113.090	172.812	.
-2 LOG L	108.695	49.767	58.928 with 27 DF (p=0.0004)
Score	.	.	38.340 with 27 DF (p=0.0726)

RSquare = 0.5169 Max-rescaled RSquare = 0.6998

BYRNE REGIME, NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-24.1571	32.9389	0.5379	0.4633	.	.
V7	1	0.00318	0.00236	1.8148	0.1779	0.556501	1.003
V28	1	-0.00950	0.00586	2.6271	0.1051	-0.954821	0.991
V9	1	3.0221	3.3995	0.7903	0.3740	0.363248	20.534
V10	1	0.1699	0.0741	5.2650	0.0218	0.955289	1.185
V24	1	0.1868	0.0868	4.6302	0.0314	1.081510	1.205
V24A	1	-0.0908	0.0976	0.8645	0.3525	-0.430446	0.913
V33	1	-0.0860	0.0662	1.6855	0.1942	-0.862323	0.918
V11	1	0.0277	0.1858	0.0222	0.8815	0.064930	1.028
V13	1	0.0335	0.3371	0.0099	0.9208	0.034120	1.034
V61	1	3.9184	3.3837	1.3410	0.2469	0.394370	50.321
V27	1	2.6311	2.2941	1.3154	0.2514	0.500045	13.889
V38	1	-2.1849	1.6788	1.6938	0.1931	-0.709189	0.112
V52	1	0.1730	0.0926	3.4933	0.0616	1.311972	1.189
V6	1	-4.0922	3.8915	1.1058	0.2930	-0.594541	0.017
V58	1	7.5194	3.9283	3.6640	0.0556	1.021158	999.000
V5	1	0.8804	0.5083	3.0003	0.0832	0.718755	2.412
V56	1	-0.3704	0.4899	0.5715	0.4497	-0.370928	0.690
V57	1	-0.2507	0.3145	0.6352	0.4255	-0.333315	0.778
V63	1	-0.1729	1.0790	0.0257	0.8727	-0.089863	0.841
TDAYS1	1	-0.0327	0.0172	3.6050	0.0576	-2.102451	0.968
TDAYS2	1	0.0945	0.0496	3.6236	0.0570	2.197728	1.099
TDAYS3	1	-0.1064	0.0499	4.5414	0.0331	-1.495354	0.899
TDAYS4	1	0.1139	0.0960	1.4083	0.2353	0.568815	1.121
TDAYS5	1	-0.0796	0.0642	1.5381	0.2149	-0.554372	0.924
V65	1	-7.1583	5.1414	1.9385	0.1638	-0.860420	0.001
V25	1	-4.9758	3.5476	1.9672	0.1607	-1.099017	0.007
V53	1	-0.0348	0.0493	0.4995	0.4797	-0.393206	0.966

Association of Predicted Probabilities and Observed Responses

Concordant	= 94.3%	Somers' D	= 0.887
Discordant	= 5.6%	Gamma	= 0.888
Tied	= 0.1%	Tau-a	= 0.429
(1568 pairs)		c	= 0.944

APPENDIX Q (continued)

WASHINGTON REGIME, NOVEMBER 1, 1995, NO AVE SUBSTITUTION

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Response Variable: V8
Response Levels: 2
Number of Observations: 225
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	105
2	1	120

WARNING: 52 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	312.915	273.718	.
SC	316.332	369.369	.
-2 LOG L	310.915	217.718	93.197 with 27 DF (p=0.0001)
Score	.	.	71.561 with 27 DF (p=0.0001)

RSquare = 0.3391 Max-rescaled RSquare = 0.4529

WASHINGTON REGIME, NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-54.7330	21.5624	6.4432	0.0111	.	.
V7	1	0.00178	0.00067	7.0921	0.0077	0.304015	1.002
V28	1	0.000873	0.00109	0.6461	0.4215	0.078244	1.001
V9	1	-0.2768	0.6143	0.2031	0.6522	-0.056081	0.758
V10	1	0.0982	0.0269	13.3711	0.0003	0.649891	1.103
V24	1	0.0760	0.0261	8.4505	0.0036	0.537100	1.079
V24A	1	-0.1278	0.0368	12.0674	0.0005	-0.734359	0.880
V33	1	0.0178	0.0154	1.3406	0.2469	0.164138	1.018
V11	1	-0.0964	0.0465	4.3000	0.0381	-0.257949	0.908
V13	1	-0.0266	0.1031	0.0665	0.7965	-0.035041	0.974
V61	1	0.3988	0.9236	0.1865	0.6658	0.047237	1.490
V27	1	2.9911	1.0959	7.4498	0.0063	0.412271	19.908
V38	1	-0.5834	0.4168	1.9589	0.1616	-0.182505	0.558
V52	1	0.00579	0.00810	0.5108	0.4748	0.084996	1.006
V6	1	-0.1997	0.4656	0.1840	0.6679	-0.054585	0.819
V58	1	1.2840	0.9656	1.7683	0.1836	0.204857	3.611
V5	1	0.2558	0.1322	3.7444	0.0530	0.212324	1.292
V56	1	-0.0569	0.1086	0.2751	0.5999	-0.076370	0.945
V57	1	-0.0581	0.1509	0.1483	0.7001	-0.052232	0.944
V63	1	0.0306	0.1003	0.0933	0.7600	0.050118	1.031
TDAYS1	1	-0.00166	0.00159	1.0857	0.2974	-0.125333	0.998
TDAYS2	1	-0.00719	0.00347	4.3057	0.0380	-0.362638	0.993
TDAYS3	1	0.000556	0.00476	0.0137	0.9069	0.016331	1.001
TDAYS4	1	0.00325	0.00724	0.2007	0.6541	0.049377	1.003
TDAYS5	1	0.00457	0.00357	1.6390	0.2005	0.181492	1.005
V65	1	-1.2855	0.6470	3.9475	0.0469	-0.238003	0.277
V25	1	-0.5256	0.5528	0.9041	0.3417	-0.139406	0.591
V53	1	-0.00599	0.00692	0.7509	0.3862	-0.138535	0.994

Association of Predicted Probabilities and Observed Responses

Concordant = 83.9%		Somers' D	= 0.679
Discordant = 16.0%		Gamma	= 0.680
Tied	= 0.1%	Tau-a	= 0.340
(12600 pairs)		c	= 0.840

APPENDIX Q (continued)

SAWYER REGIME, NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in Contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 175
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	79
2	1	96

WARNING: 64 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	242.947	227.496	.
SC	246.112	316.110	.
-2 LOG L	240.947	171.496	69.452 with 27 DF (p=0.0001)
Score	.	.	53.560 with 27 DF (p=0.0017)

RSquare = 0.3276 Max-rescaled RSquare = 0.4382

SAWYER REGIME, NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-9.6678	16.8391	0.3296	0.5659	.	.
V7	1	0.000202	0.000621	0.1057	0.7451	0.039223	1.000
V28	1	0.00504	0.00187	7.2685	0.0070	0.387823	1.005
V9	1	0.6017	0.5587	1.1598	0.2815	0.142077	1.825
V10	1	0.0304	0.0135	5.0869	0.0241	0.276353	1.031
V24	1	0.0431	0.0168	6.5975	0.0102	0.364470	1.044
V24A	1	-0.0667	0.0235	8.0362	0.0046	-0.423839	0.936
V33	1	-0.00127	0.0100	0.0160	0.8993	-0.015354	0.999
V11	1	-0.0260	0.0470	0.3063	0.5799	-0.065713	0.974
V13	1	-0.3219	0.1313	6.0122	0.0142	-0.409830	0.725
V61	1	0.9462	1.0699	0.7821	0.3765	0.113362	2.576
V27	1	1.0872	0.9873	1.2127	0.2708	0.157634	2.966
V38	1	-0.3651	0.4682	0.6080	0.4355	-0.115433	0.694
V52	1	-0.00553	0.00691	0.6422	0.4229	-0.102860	0.994
V6	1	-0.4117	0.5258	0.6133	0.4336	-0.105686	0.662
V58	1	-0.3152	1.1919	0.0699	0.7914	-0.044435	0.730
V5	1	-0.2194	0.1597	1.8870	0.1695	-0.187741	0.803
V56	1	-0.00462	0.1284	0.0013	0.9713	-0.004425	0.995
V57	1	-0.0404	0.1279	0.0998	0.7520	-0.042090	0.960
V63	1	0.0896	0.1177	0.5794	0.4465	0.105817	1.094
TDAYS1	1	-0.00234	0.00215	1.1856	0.2762	-0.140148	0.998
TDAYS2	1	-0.00240	0.00506	0.2251	0.6352	-0.075714	0.998
TDAYS3	1	-0.0138	0.00970	2.0202	0.1552	-0.691609	0.986
TDAYS4	1	0.0241	0.0141	2.9342	0.0867	1.160436	1.024
TDAYS5	1	0.00587	0.00807	0.5296	0.4668	0.096469	1.006
V65	1	-1.1472	0.5539	4.2904	0.0383	-0.279213	0.318
V25	1	0.4055	0.5549	0.5339	0.4650	0.111943	1.500
V53	1	0.00156	0.00596	0.0683	0.7939	0.038292	1.002

Association of Predicted Probabilities and Observed Responses

Concordant = 84.3%		Somers' D	= 0.689
Discordant = 15.5%		Gamma	= 0.690
Tied	= 0.2%	Tau-a	= 0.343
(7584 pairs)		c	= 0.844

APPENDIX Q (continued)

DALEY REGIME, NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 102
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	43
2	1	59

WARNING: 44 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	140.882	121.442	.
SC	143.507	194.941	.
-2 LOG L	138.882	65.442	73.440 with 27 DF (p=0.0001)
Score	.	.	51.550 with 27 DF (p=0.0030)

RSquare = 0.5132 Max-rescaled RSquare = 0.6901

DALEY REGIME, NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	7.8283	31.8471	0.0604	0.8058	.	.
V7	1	0.000468	0.00138	0.1152	0.7343	0.100828	1.000
V28	1	0.00510	0.00327	2.4303	0.1190	0.456623	1.005
V9	1	0.0788	1.1757	0.0045	0.9466	0.019485	1.082
V10	1	0.0465	0.0300	2.4107	0.1205	0.429823	1.048
V24	1	0.0817	0.0643	1.6154	0.2037	0.715099	1.085
V24A	1	-0.1883	0.0876	4.6203	0.0316	-1.354686	0.828
V33	1	-0.0510	0.0262	3.7853	0.0517	-0.824339	0.950
V11	1	0.00557	0.1029	0.0029	0.9568	0.016128	1.006
V13	1	-0.9178	0.3402	7.2793	0.0070	-1.064362	0.399
V61	1	6.7696	2.8263	5.7369	0.0166	0.771081	870.943
V27	1	2.1171	1.9271	1.2069	0.2719	0.363831	8.307
V38	1	-2.2778	1.3223	2.9674	0.0850	-0.676878	0.103
V52	1	0.1190	0.0640	3.4553	0.0630	0.880983	1.126
V6	1	12.0969	9.4711	1.6313	0.2015	0.929264	999.000
V58	1	-0.0322	1.7919	0.0003	0.9856	-0.004876	0.968
V5	1	-0.2531	0.2717	0.8677	0.3516	-0.201835	0.776
V56	1	0.4473	0.4378	1.0439	0.3069	0.301887	1.564
V57	1	-0.3151	0.2031	2.4077	0.1207	-0.397295	0.730
V63	1	0.5176	0.4354	1.4133	0.2345	0.438000	1.678
TDAYS1	1	0.00397	0.00329	1.4587	0.2271	0.351925	1.004
TDAYS2	1	-0.00313	0.0101	0.0966	0.7559	-0.142496	0.997
TDAYS3	1	-0.0250	0.0170	2.1570	0.1419	-0.897170	0.975
TDAYS4	1	0.00510	0.0182	0.0780	0.7800	0.116017	1.005
TDAYS5	1	-0.00187	0.00230	0.6573	0.4175	-0.370875	0.998
V65	1	-1.1818	0.8300	2.0271	0.1545	-0.303814	0.307
V25	1	-0.00107	1.3768	0.0000	0.9994	-0.000266	0.999
V53	1	-0.00051	0.0230	0.0005	0.9824	-0.007841	0.999

Association of Predicted Probabilities and Observed Responses

Concordant	= 93.2%	Somers' D	= 0.864
Discordant	= 6.8%	Gamma	= 0.864
Tied	= 0.0%	Tau-a	= 0.426
(2537 pairs)		c	= 0.932

APPENDIX Q (continued)

DBE FIRMS, NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 111
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	24
2	1	87

WARNING: 38 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	117.901	136.413	.
SC	120.611	209.570	.
-2 LOG L	115.901	82.413	33.488 with 26 DF (p=0.1484)
Score	.	.	27.779 with 26 DF (p=0.3694)

RSquare = 0.2604 Max-rescaled RSquare = 0.4019

NOTE: The following parameters have been set to 0, since the variables are a linear combination of other variables as shown.

V65 = 1 * INTERCPT

DBE FIRMS, NOVEMBER 1, 1995 · NO AVERAGE SUBSTITUTED

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	61.7373	30.1667	4.1883	0.0407	.	.
V7	1	0.00183	0.00134	1.8682	0.1717	0.265570	1.002
V28	1	-0.00400	0.00312	1.6417	0.2001	-0.316445	0.996
V9	1	0.3971	0.8402	0.2234	0.6365	0.109200	1.487
V10	1	0.0441	0.0302	2.1335	0.1441	0.303085	1.045
V24	1	0.0697	0.0529	1.7373	0.1875	0.479941	1.072
V24A	1	-0.0975	0.0653	2.2243	0.1359	-0.517018	0.907
V33	1	-0.0140	0.0156	0.8010	0.3708	-0.207295	0.986
V11	1	0.0355	0.0819	0.1873	0.6652	0.095923	1.036
V13	1	-0.5947	0.2422	6.0275	0.0141	-0.775257	0.552
V61	1	1.0290	1.9891	0.2676	0.6049	0.106191	2.798
V27	1	-3.1920	1.5978	3.9911	0.0457	-0.399749	0.041
V38	1	0.6934	0.9207	0.5673	0.4513	0.188240	2.001
V52	1	-0.0450	0.0297	2.2916	0.1301	-0.616670	0.956
V6	1	-1.4621	0.8861	2.7231	0.0989	-0.404083	0.232
V58	1	-0.3475	1.2954	0.0720	0.7885	-0.051046	0.706
V5	1	-0.2589	0.2433	1.1320	0.2874	-0.214287	0.772
V56	1	-0.1274	0.1730	0.5420	0.4616	-0.161501	0.880
V57	1	-0.1194	0.1707	0.4896	0.4841	-0.166775	0.887
V63	1	0.3269	0.1701	3.6918	0.0547	0.484261	1.387
TDAYS1	1	-0.00115	0.00190	0.3646	0.5460	-0.106638	0.999
TDAYS2	1	-0.00104	0.00653	0.0253	0.8736	-0.041870	0.999
TDAYS3	1	0.00244	0.00983	0.0617	0.8038	0.059118	1.002
TDAYS4	1	0.00994	0.0271	0.1349	0.7134	0.060677	1.010
TDAYS5	1	0.00418	0.00748	0.3121	0.5764	0.117215	1.004
V65	0	0	.	.	.	.	.
V25	1	-1.9385	1.0656	3.3091	0.0689	-0.518151	0.144
V53	1	-0.0287	0.0213	1.8213	0.1772	-0.500416	0.972

Association of Predicted Probabilities and Observed Responses

Concordant = 84.8%		Somers' D = 0.698	
Discordant = 14.9%		Gamma = 0.700	
Tied = 0.3%		Tau-a = 0.239	
(2088 pairs)		c = 0.849	

APPENDIX Q (continued)

SMALL FIRMS, NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change I contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 397
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	177
2	1	220

WARNING: 172 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	547.692	452.329	.
SC	551.676	563.879	.
-2 LOG L	545.692	396.329	149.363 with 27 DF (p=0.0001)
Score	.	.	119.342 with 27 DF (p=0.0001)

RSquare = 0.3136 Max-rescaled RSquare = 0.4197

SMALL FIRMS, NOVEMBER 1, 1995, NO AVE SUBSTITUTED

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-18.0641	10.0998	3.1989	0.0737	.	.
V7	1	0.00633	0.00207	9.3216	0.0023	0.221399	1.006
V28	1	0.000374	0.00120	0.0962	0.7564	0.022369	1.000
V9	1	0.5724	0.4207	1.8512	0.1736	0.117640	1.773
V10	1	0.0358	0.0117	9.3228	0.0023	0.293317	1.036
V24	1	0.0442	0.0138	10.2820	0.0013	0.327865	1.045
V24A	1	-0.0840	0.0189	19.7752	0.0001	-0.484164	0.919
V33	1	-0.00154	0.00610	0.0639	0.8005	-0.022864	0.998
V11	1	-0.0581	0.0319	3.3241	0.0683	-0.155735	0.944
V13	1	-0.2651	0.0843	9.8868	0.0017	-0.326058	0.767
V61	1	0.9540	0.6563	2.1132	0.1460	0.110895	2.596
V27	1	1.0700	0.5542	3.7268	0.0535	0.167467	2.915
V38	1	-0.1940	0.3118	0.3872	0.5338	-0.060622	0.824
V52	1	-0.00063	0.00925	0.0046	0.9459	-0.006428	0.999
V6	1	-0.6445	0.3172	4.1281	0.0422	-0.173352	0.525
V58	1	0.4326	0.5602	0.5963	0.4400	0.066400	1.541
V5	1	0.0350	0.0892	0.1541	0.6947	0.028575	1.036
V56	1	-0.0505	0.0619	0.6649	0.4148	-0.071588	0.951
V57	1	0.0796	0.0629	1.5990	0.2060	0.108350	1.083
V63	1	-0.0307	0.0660	0.2164	0.6418	-0.044265	0.970
TDAYS1	1	-0.00101	0.00119	0.7246	0.3946	-0.075879	0.999
TDAYS2	1	-0.00097	0.00213	0.2094	0.6473	-0.045767	0.999
TDAYS3	1	-0.00221	0.00310	0.5096	0.4753	-0.065365	0.998
TDAYS4	1	0.00270	0.00512	0.2791	0.5973	0.037198	1.003
TDAYS5	1	-0.00028	0.00106	0.0706	0.7904	-0.029369	1.000
V65	1	-1.0685	0.3686	8.4018	0.0037	-0.239845	0.344
V25	1	-0.4008	0.3618	1.2275	0.2679	-0.107132	0.670
V53	1	0.00155	0.00477	0.1051	0.7458	0.031578	1.002

Association of Predicted Probabilities and Observed Responses

Concordant	= 83.5%	Somers' D	= 0.672
Discordant	= 16.4%	Gamma	= 0.673
Tied	= 0.1%	Tau-a	= 0.333
(38940 pairs)		c	= 0.836

APPENDIX Q (continued)

CHICAGO FIRMS, NOVEMBER 1, 1995

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 247
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	121
2	1	126

WARNING: 105 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	344.313	281.607	.
SC	347.823	379.870	.
-2 LOG L	342.313	225.607	116.706 with 27 DF (p=0.0001)
Score	.	.	88.430 with 27 DF (p=0.0001)

RSquare = 0.3766 Max-rescaled RSquare = 0.5021

CHICAGO FIRMS, NOVEMBER 1, 1995

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-11.2677	14.4187	0.6107	0.4345	.	.
V7	1	0.00121	0.000804	2.2544	0.1332	0.155353	1.001
V28	1	0.00154	0.00133	1.3483	0.2456	0.123315	1.002
V9	1	0.9913	0.4946	4.0166	0.0451	0.223273	2.695
V10	1	0.0654	0.0195	11.2501	0.0008	0.547383	1.068
V24	1	0.0457	0.0217	4.4284	0.0353	0.347127	1.047
V24A	1	-0.1004	0.0288	12.1719	0.0005	-0.603777	0.904
V33	1	-0.00219	0.00902	0.0587	0.8086	-0.031258	0.998
V11	1	-0.0940	0.0433	4.7073	0.0300	-0.258909	0.910
V13	1	-0.1404	0.1020	1.8951	0.1686	-0.174672	0.869
V61	1	1.0907	0.9089	1.4399	0.2302	0.122838	2.976
V27	1	0.7380	0.7391	0.9971	0.3180	0.111225	2.092
V38	1	-0.3596	0.4636	0.6018	0.4379	-0.106906	0.698
V52	1	-0.0107	0.0174	0.3797	0.5378	-0.111903	0.989
V6	1	-0.7697	0.4164	3.4168	0.0645	-0.209935	0.463
V58	1	1.3768	0.7910	3.0300	0.0817	0.212591	3.962
V5	1	0.2188	0.1694	1.6687	0.1964	0.131751	1.245
V56	1	-0.0617	0.0773	0.6364	0.4250	-0.088660	0.940
V57	1	-0.0473	0.0827	0.3262	0.5679	-0.065613	0.954
V63	1	0.1395	0.1000	1.9451	0.1631	0.203716	1.150
TDAYS1	1	-0.00114	0.00160	0.5119	0.4743	-0.090693	0.999
TDAYS2	1	-0.00177	0.00317	0.3115	0.5768	-0.077283	0.998
TDAYS3	1	-0.00920	0.00590	2.4316	0.1189	-0.227335	0.991
TDAYS4	1	0.00563	0.00732	0.5910	0.4420	0.089563	1.006
TDAYS5	1	-0.00102	0.00157	0.4240	0.5149	-0.133428	0.999
V65	1	-1.6911	0.5051	11.2082	0.0008	-0.396014	0.184
V25	1	-0.9691	0.4977	3.7923	0.0515	-0.255055	0.379
V53	1	-0.0108	0.00651	2.7566	0.0969	-0.229800	0.989

Association of Predicted Probabilities and Observed Responses

Concordant = 86.3%	Somers' D = 0.727
Discordant = 13.6%	Gamma = 0.727
Tied = 0.1%	Tau-a = 0.365
(15246 pairs)	c = 0.863

APPENDIX Q (continued)

BYRNE COMPARED WITH OTHER MAYORS ON POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	681.011	.
SC	812.929	855.738	.
-2 LOG L	806.560	601.011	205.550 with 39 DF (p=0.0001)
Score	.	.	161.381 with 39 DF (p=0.0001)

RSquare = 0.2971 Max-rescaled RSquare = 0.3965

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-17.2957	8.6649	3.9842	0.0459	.	.
BYRNE	1	-9.8693	5.5350	3.1794	0.0746	-1.823329	0.000
V7	1	0.000735	0.00034	4.6825	0.0305	0.138936	1.001
V28	1	0.00164	0.000703	5.4691	0.0194	0.143741	1.002
V9	1	0.4210	0.3085	1.8615	0.1725	0.090881	1.523
V10	1	0.0426	0.00969	19.3458	0.0001	0.338421	1.044
V24	1	0.0521	0.0112	21.7633	0.0001	0.402804	1.054
V24A	1	-0.0754	0.0146	26.6680	0.0001	-0.462300	0.927
V33	1	-0.00421	0.00522	0.6509	0.4198	-0.064896	0.996
V11	1	-0.0560	0.0252	4.9433	0.0262	-0.149373	0.945
V13	1	-0.1754	0.0634	7.6638	0.0056	-0.217576	0.839
V61	1	0.6785	0.5536	1.5020	0.2204	0.078756	1.971
V27	1	1.1666	0.4763	5.9990	0.0143	0.180258	3.211
V38	1	-0.2780	0.2406	1.3358	0.2478	-0.086998	0.757
V52	1	0.00133	0.00442	0.0910	0.7629	0.019118	1.001
V6	1	-0.0238	0.2707	0.0078	0.9298	-0.006400	0.976
V58	1	-0.0487	0.4687	0.0108	0.9172	-0.007474	0.952
V5	1	-0.00291	0.0776	0.0014	0.9701	-0.002415	0.997
V56	1	0.00842	0.0529	0.0254	0.8734	0.011854	1.008
V57	1	-0.0100	0.0583	0.0297	0.8631	-0.014055	0.990
V63	1	0.00909	0.0525	0.0300	0.8625	0.013092	1.009
TDAYS1	1	-0.00164	0.00103	2.5449	0.1106	-0.118465	0.998
TDAYS2	1	-0.00267	0.00212	1.5927	0.2069	-0.111997	0.997
TDAYS3	1	-0.00157	0.00295	0.2852	0.5933	-0.057728	0.998
TDAYS4	1	0.00235	0.00348	0.4583	0.4984	0.069908	1.002
TDAYS5	1	0.00314	0.00233	1.8157	0.1778	0.273756	1.003
V65	1	-1.0899	0.3131	12.1191	0.0005	-0.236117	0.336
V25	1	-0.2573	0.3020	0.7256	0.3943	-0.068683	0.773
V53	1	-0.00220	0.00371	0.3534	0.5522	-0.047467	0.998
INTV58B	1	2.7278	2.1186	1.6579	0.1979	0.214633	15.300
INTV5B	1	0.4976	0.2527	3.8784	0.0489	2.004378	1.645
INTV56B	1	-0.6659	0.2633	6.3970	0.0114	-0.345127	0.514
INTV57B	1	-0.0341	0.1654	0.0425	0.8366	-0.033039	0.966
INTV63B	1	0.0778	0.3840	0.0410	0.8395	0.025019	1.081
INTYS1B	1	-0.0122	0.00796	2.3652	0.1241	-0.406235	0.988
INTYS2B	1	0.0754	0.0343	4.8412	0.0278	0.725998	1.078
INTYS3B	1	-0.0620	0.0312	3.9476	0.0469	-0.273257	0.940
INTYS4B	1	0.0333	0.0448	0.5506	0.4581	0.100004	1.034
INTYS5B	1	-0.00481	0.00379	1.6102	0.2045	-0.400482	0.995
INTV65B	1	-0.9510	1.4228	0.4467	0.5039	-0.043316	0.386

Association of Predicted Probabilities and Observed Responses

Concordant = 82.3%	Somers' D = 0.648
Discordant = 17.5%	Gamma = 0.649
Tied = 0.1%	Tau-a = 0.324
(84732 pairs)	c = 0.824

APPENDIX Q (continued)

WASHINGTON COMPARED WITH OTHER MAYORS ON POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	697.120	.
SC	812.929	871.848	.
-2 LOG L	806.560	617.120	189.440 with 39 DF (p=0.0001)
Score	.	.	152.707 with 39 DF (p=0.0001)

RSquare = 0.2774 Max-rescaled RSquare = 0.3703

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-13.3538	8.2876	2.5963	0.1071	.	.
WASH	1	-1.6070	3.1474	0.2607	0.6096	-0.426132	0.200
V7	1	0.000702	0.000332	4.4721	0.0345	0.132703	1.001
V28	1	0.00133	0.000683	3.7720	0.0521	0.116002	1.001
V9	1	0.4301	0.3072	1.9598	0.1615	0.092848	1.537
V10	1	0.0416	0.00945	19.3897	0.0001	0.330569	1.042
V24	1	0.0495	0.0107	21.2982	0.0001	0.382657	1.051
V24A	1	-0.0743	0.0142	27.2551	0.0001	-0.455887	0.928
V33	1	-0.00619	0.00555	1.2451	0.2645	-0.095403	0.994
V11	1	-0.0572	0.0246	5.4008	0.0201	-0.152493	0.944
V13	1	-0.1842	0.0629	8.5796	0.0034	-0.228404	0.832
V61	1	0.8917	0.5539	2.5912	0.1075	0.103507	2.439
V27	1	0.9738	0.4478	4.7295	0.0297	0.150470	2.648
V38	1	-0.2971	0.2357	1.5894	0.2074	-0.092977	0.743
V52	1	0.00169	0.00440	0.1467	0.7017	0.024180	1.002
V6	1	-0.2825	0.2808	1.0121	0.3144	-0.075813	0.754
V58	1	-0.3235	0.5186	0.3892	0.5327	-0.049600	0.724
V5	1	0.0458	0.0909	0.2543	0.6141	0.038072	1.047
V56	1	-0.0398	0.0617	0.4150	0.5194	-0.055978	0.961
V57	1	-0.0580	0.0621	0.8725	0.3503	-0.081136	0.944
V63	1	0.0766	0.0706	1.1781	0.2777	0.110395	1.080
TDAYS1	1	-0.00220	0.00119	3.4135	0.0647	-0.158863	0.998
TDAYS2	1	0.00162	0.00221	0.5396	0.4626	0.067990	1.002
TDAYS3	1	-0.00571	0.00364	2.4634	0.1165	-0.209423	0.994
TDAYS4	1	0.00702	0.00437	2.5799	0.1082	0.208672	1.007
TDAYS5	1	-0.00084	0.00153	0.2992	0.5844	-0.072904	0.999
V65	1	-1.1818	0.3489	11.4730	0.0007	-0.256028	0.307
V25	1	-0.1853	0.2934	0.3991	0.5276	-0.049482	0.831
V53	1	-0.00081	0.00360	0.0509	0.8215	-0.017495	0.999
INTV58W	1	1.0994	0.8417	1.7059	0.1915	0.180575	3.002
INTV5W	1	0.0283	0.1436	0.0389	0.8437	0.163547	1.029
INTV56W	1	-0.0114	0.1118	0.0104	0.9186	-0.016440	0.989
INTV57W	1	0.1911	0.1767	1.1693	0.2795	0.145652	1.211
INTV63W	1	-0.1009	0.1181	0.7302	0.3928	-0.119570	0.904
INTYS1W	1	-0.00006	0.00218	0.0009	0.9763	-0.003493	1.000
INTYS2W	1	-0.00537	0.00375	2.0514	0.1521	-0.160997	0.995
INTYS3W	1	0.00413	0.00601	0.4709	0.4926	0.069234	1.004
INTYS4W	1	-0.00638	0.00857	0.5530	0.4571	-0.063587	0.994
INTYS5W	1	0.00585	0.00403	2.1109	0.1462	0.119478	1.006
INTV65W	1	-0.1261	0.7329	0.0296	0.8634	-0.013827	0.882

WASHINGTON COMPARED WITH OTHER MAYORS ON POLITICAL VARIABLES

Association of Predicted Probabilities and Observed Responses

Concordant = 81.1%	Somers' D = 0.623
Discordant = 18.8%	Gamma = 0.624
Tied = 0.2%	Tau-a = 0.311
(84732 pairs)	c = 0.812

APPENDIX Q (continued)

SAWYER COMPARED WITH OTHER MAYORS ON POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	689.254	.
SC	812.929	863.982	.
-2 LOG L	806.560	609.254	197.306 with 39 DF (p=0.0001)
Score	.	.	158.380 with 39 DF (p=0.0001)

RSquare = 0.2871 Max-rescaled RSquare = 0.3832

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-15.2499	8.4473	3.2591	0.0710	.	.
SAWYER	1	6.5611	3.3446	3.8483	0.0498	1.692274	707.066
V7	1	0.000745	0.00034	4.8114	0.0283	0.140823	1.001
V28	1	0.00134	0.000685	3.8145	0.0508	0.117005	1.001
V9	1	0.4224	0.3120	1.8332	0.1757	0.091203	1.526
V10	1	0.0395	0.00930	18.0538	0.0001	0.314069	1.040
V24	1	0.0490	0.0108	20.6542	0.0001	0.378620	1.050
V24A	1	-0.0788	0.0144	29.7451	0.0001	-0.483092	0.924
V33	1	-0.00332	0.00527	0.3962	0.5291	-0.051055	0.997
V11	1	-0.0548	0.0249	4.8518	0.0276	-0.146098	0.947
V13	1	-0.1962	0.0635	9.5615	0.0020	-0.243373	0.822
V61	1	0.8834	0.5503	2.5771	0.1084	0.102543	2.419
V27	1	1.0052	0.4562	4.8552	0.0276	0.155314	2.732
V38	1	-0.3414	0.2385	2.0482	0.1524	-0.106830	0.711
V52	1	0.00038	0.00440	0.0075	0.9311	0.005453	1.000
V6	1	-0.3074	0.2806	1.1997	0.2734	-0.082494	0.735
V58	1	0.7521	0.5108	2.1676	0.1410	0.115305	2.121
V5	1	0.1260	0.0897	1.9716	0.1603	0.104638	1.134
V56	1	-0.0592	0.0593	0.9964	0.3182	-0.083358	0.943
V57	1	0.0171	0.0627	0.0744	0.7850	0.023921	1.017
V63	1	-0.0517	0.0620	0.6967	0.4039	-0.074487	0.950
TDAYS1	1	-0.00203	0.00117	3.0063	0.0829	-0.146787	0.998
TDAYS2	1	0.000325	0.00216	0.0226	0.8805	0.013622	1.000
TDAYS3	1	-0.00682	0.00381	3.2014	0.0736	-0.249818	0.993
TDAYS4	1	0.00283	0.00547	0.2666	0.6056	0.083970	1.003
TDAYS5	1	-0.00024	0.000835	0.0840	0.7719	-0.021082	1.000
V65	1	-1.0226	0.3952	6.6961	0.0097	-0.221548	0.360
V25	1	-0.2671	0.2995	0.7952	0.3725	-0.071313	0.766
V53	1	-0.00071	0.00367	0.0378	0.8458	-0.015399	0.999
INTV58S	1	-1.5113	0.9202	2.6972	0.1005	-0.224114	0.221
INTV5S	1	-0.3075	0.1553	3.9185	0.0478	-1.724821	0.735
INTV56S	1	0.1553	0.1344	1.3357	0.2478	0.205451	1.168
INTV57S	1	-0.0967	0.1249	0.5995	0.4388	-0.170008	0.908
INTV63S	1	0.1755	0.1214	2.0902	0.1482	0.256863	1.192
INTYS1S	1	-0.00079	0.00212	0.1396	0.7087	-0.046742	0.999
INTYS2S	1	-0.00264	0.00451	0.3417	0.5588	-0.085459	0.997
INTYS3S	1	0.00740	0.00604	1.5010	0.2205	0.230224	1.007
INTYS4S	1	0.0159	0.0181	0.7665	0.3813	0.424960	1.016
INTYS5S	1	0.00202	0.00425	0.2265	0.6341	0.045538	1.002
INTV65S	1	-0.0138	0.6126	0.0005	0.9821	-0.002163	0.986

Association of Predicted Probabilities and Observed Responses

Concordant = 81.3%		Somers' D	= 0.627
Discordant = 18.6%		Gamma	= 0.628
Tied	= 0.1%	Tau-a	= 0.313
(84732 pairs)		c	= 0.814

APPENDIX Q (continued)

DALEY COMPARED WITH OTHER MAYORS ON POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	694.234	.
SC	812.929	868.961	.
-2 LOG L	806.560	614.234	192.326 with 39 DF (p=0.0001)
Score	.	.	152.926 with 39 DF (p=0.0001)

RSquare = 0.2810 Max-rescaled RSquare = 0.3750

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-12.8477	8.1433	2.4891	0.1146	.	.
DALEY	1	-1.1705	4.5748	0.0655	0.7981	-0.251820	0.310
V7	1	0.000764	0.000341	5.0278	0.0249	0.144467	1.001
V28	1	0.00126	0.000684	3.3801	0.0660	0.109928	1.001
V9	1	0.3100	0.3105	0.9970	0.3180	0.066930	1.363
V10	1	0.0415	0.00973	18.1550	0.0001	0.329353	1.042
V24	1	0.0476	0.0107	19.9131	0.0001	0.367434	1.049
V24A	1	-0.0737	0.0141	27.4886	0.0001	-0.451948	0.929
V33	1	-0.00438	0.00548	0.6393	0.4240	-0.067475	0.996
V11	1	-0.0571	0.0248	5.2901	0.0214	-0.152179	0.945
V13	1	-0.1586	0.0625	6.4423	0.0111	-0.196715	0.853
V61	1	0.5807	0.5418	1.1490	0.2838	0.067413	1.787
V27	1	0.9538	0.4491	4.5117	0.0337	0.147382	2.596
V38	1	-0.3574	0.2377	2.2608	0.1327	-0.111844	0.699
V52	1	0.00182	0.00444	0.1686	0.6813	0.026164	1.002
V6	1	-0.1517	0.2825	0.2886	0.5911	-0.040727	0.859
V58	1	0.1064	0.5258	0.0410	0.8396	0.016314	1.112
V5	1	0.0874	0.0784	1.2427	0.2650	0.072611	1.091
V56	1	-0.0185	0.0585	0.1005	0.7512	-0.026104	0.982
V57	1	0.0348	0.0531	0.4295	0.5122	0.048654	1.035
V63	1	-0.00991	0.0615	0.0260	0.8719	-0.014278	0.990
TDAYS1	1	-0.00252	0.00115	4.7799	0.0288	-0.182526	0.997
TDAYS2	1	-0.00065	0.00194	0.1107	0.7393	-0.027076	0.999
TDAYS3	1	-0.00230	0.00302	0.5820	0.4455	-0.084325	0.998
TDAYS4	1	0.00569	0.00462	1.5197	0.2177	0.169084	1.006
TDAYS5	1	-0.00028	0.000815	0.1203	0.7287	-0.024622	1.000
V65	1	-1.3318	0.3612	13.5960	0.0002	-0.288520	0.264
V25	1	-0.1553	0.2942	0.2785	0.5977	-0.041450	0.856
V53	1	-0.00176	0.00364	0.2344	0.6283	-0.037977	0.998
INTV58D	1	-0.6905	1.2009	0.3306	0.5653	-0.082445	0.501
INTV5D	1	-0.0174	0.2046	0.0072	0.9323	-0.080684	0.983
INTV56D	1	0.3048	0.2734	1.2429	0.2649	0.500948	1.356
INTV57D	1	-0.3472	0.1598	4.7194	0.0298	-0.309849	0.707
INTV63D	1	0.0137	0.2007	0.0046	0.9457	0.006858	1.014
INTYS1D	1	0.00335	0.00217	2.3974	0.1215	0.166239	1.003
INTYS2D	1	-0.0001	0.00661	0.0002	0.9876	-0.001823	1.000
INTYS3D	1	-0.0248	0.0142	3.0707	0.0797	-0.311386	0.975
INTYS4D	1	0.00601	0.0139	0.1860	0.6662	0.067878	1.006
INTYS5D	1	0.0106	0.00981	1.1600	0.2815	0.113768	1.011
INTV65D	1	0.2341	0.7126	0.1079	0.7425	0.028987	1.264

Association of Predicted Probabilities and Observed Responses

Concordant = 81.1%		Somers' D	= 0.624
Discordant = 18.7%		Gamma	= 0.625
Tied	= 0.2%	Tau-a	= 0.311
(84732 pairs)		c	= 0.812

APPENDIX Q (continued)

TRANSITION AND INTERACTIVE POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractors, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	690.771	.
SC	812.929	865.499	.
-2 LOG L	806.560	610.771	195.789 with 39 DF (p=0.0001)
Score	.	.	155.927 with 39 DF (p=0.0001)

RSquare = 0.2853 Max-rescaled RSquare = 0.3807

TRANSITION AND INTERACTIVE POLITICAL VARIABLES

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-13.7350	8.3181	2.7265	0.0987	.	.
TRANSM	1	1.4607	3.2080	0.2073	0.6489	0.384414	4.309
V7	1	0.000622	0.000335	3.4483	0.0633	0.117642	1.001
V28	1	0.00150	0.000689	4.7428	0.0294	0.131224	1.002
V9	1	0.4190	0.3059	1.8766	0.1707	0.090468	1.520
V10	1	0.0401	0.00954	17.7063	0.0001	0.318765	1.041
V24	1	0.0475	0.0107	19.5533	0.0001	0.367097	1.049
V24A	1	-0.0745	0.0141	27.7657	0.0001	-0.456729	0.928
V33	1	-0.00362	0.00512	0.4984	0.4802	-0.055706	0.996
V11	1	-0.0502	0.0250	4.0413	0.0444	-0.133796	0.951
V13	1	-0.1951	0.0640	9.3017	0.0023	-0.241947	0.823
V61	1	0.8372	0.5534	2.2887	0.1303	0.097178	2.310
V27	1	0.9403	0.4496	4.3739	0.0365	0.145287	2.561
V38	1	-0.2932	0.2371	1.5290	0.2163	-0.091749	0.746
V52	1	0.00100	0.00435	0.0529	0.8180	0.014341	1.001
V6	1	-0.3461	0.2759	1.5728	0.2098	-0.092882	0.707
V58	1	0.6623	0.5270	1.5797	0.2088	0.101546	1.939
V5	1	0.0615	0.0924	0.4423	0.5060	0.051049	1.063
V56	1	-0.0151	0.0592	0.0653	0.7983	-0.021280	0.985
V57	1	0.0200	0.0690	0.0839	0.7721	0.027976	1.020
V63	1	-0.1006	0.0656	2.3554	0.1248	-0.144933	0.904
TDAYS1	1	-0.00143	0.00114	1.5726	0.2098	-0.103068	0.999
TDAYS2	1	-0.00104	0.00226	0.2107	0.6462	-0.043417	0.999
TDAYS3	1	-0.00594	0.00388	2.3421	0.1259	-0.217849	0.994
TDAYS4	1	-0.00074	0.00610	0.0149	0.9030	-0.022098	0.999
TDAYS5	1	-0.00024	0.000759	0.0978	0.7545	-0.020660	1.000
V65	1	-1.2391	0.4032	9.4458	0.0021	-0.268449	0.290
V25	1	-0.1229	0.2942	0.1745	0.6761	-0.032814	0.884
V53	1	0.000092	0.00369	0.0006	0.9802	0.001972	1.000
INTV58T	1	-0.5507	0.9972	0.3050	0.5808	-0.070075	0.577
INTV5T	1	-0.0432	0.1460	0.0877	0.7671	-0.249121	0.958
INTV56T	1	0.00366	0.1156	0.0010	0.9747	0.005078	1.004
INTV57T	1	-0.1306	0.1211	1.1628	0.2809	-0.223089	0.878
INTV63T	1	0.1688	0.1136	2.2076	0.1373	0.248172	1.184
INTYS1T	1	-0.00256	0.00218	1.3853	0.2392	-0.156748	0.997
INTYS2T	1	0.00212	0.00394	0.2891	0.5908	0.071108	1.002
INTYS3T	1	0.00514	0.00581	0.7832	0.3762	0.160528	1.005
INTYS4T	1	0.0363	0.0186	3.8094	0.0510	0.974145	1.037
INTYS5T	1	-0.00139	0.00392	0.1259	0.7228	-0.031816	0.999
INTV65T	1	0.0902	0.5968	0.0228	0.8799	0.013939	1.094

Association of Predicted Probabilities and Observed Responses

Concordant = 81.6%		Somers' D	= 0.633
Discordant = 18.3%		Gamma	= 0.634
Tied	= 0.1%	Tau-a	= 0.316
(84732 pairs)		c	= 0.816

APPENDIX Q (continued)

REGIME(TRANSITION)/INTERACTIVE POLITICAL VARIABLES

The LOGISTIC Procedure

Data Set: WORK.REGIME1
Change in contractor, 0 = Incumbent wins
Response Variable: V8
Response Levels: 2
Number of Observations: 583
Link Function: Logit

Response Profile

Ordered Value	V8	Count
1	0	276
2	1	307

WARNING: 237 observation(s) were deleted due to missing values for the response or explanatory variables.

Model Fitting Information and Testing Global Null Hypothesis BETA=0

Criterion	Intercept Only	Intercept and Covariates	Chi-Square for Covariates
AIC	808.560	692.620	.
SC	812.929	867.348	.
-2 LOG L	806.560	612.620	193.940 with 39 DF (p=0.0001)
Score	.	.	154.993 with 39 DF (p=0.0001)

RSquare = 0.2830 Max-rescaled RSquare = 0.3777

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > Chi-Square	Standardized Estimate	Odds Ratio
INTERCPT	1	-11.0486	8.3717	1.7417	0.1869	.	.
TRANS	1	-6.9056	3.2588	4.4904	0.0341	-1.885843	0.001
V7	1	0.000729	0.000337	4.6826	0.0305	0.137886	1.001
V28	1	0.00142	0.000694	4.1778	0.0410	0.124074	1.001
V9	1	0.4672	0.3094	2.2803	0.1310	0.100864	1.596
V10	1	0.0375	0.00965	15.0695	0.0001	0.297726	1.038
V24	1	0.0502	0.0107	21.8773	0.0001	0.387725	1.051
V24A	1	-0.0728	0.0139	27.5682	0.0001	-0.446162	0.930
V33	1	-0.00359	0.00536	0.4483	0.5031	-0.055281	0.996
V11	1	-0.0499	0.0247	4.0725	0.0436	-0.133079	0.951
V13	1	-0.1768	0.0631	7.8598	0.0051	-0.219332	0.838
V61	1	0.7689	0.5471	1.9750	0.1599	0.089251	2.157
V27	1	1.0412	0.4493	5.3700	0.0205	0.160883	2.833
V38	1	-0.3269	0.2363	1.9129	0.1666	-0.102278	0.721
V52	1	0.000581	0.00426	0.0186	0.8915	0.008330	1.001
V6	1	-0.3850	0.3916	0.9663	0.3256	-0.103324	0.680
V58	1	-0.2232	0.8760	0.0649	0.7989	-0.034216	0.800
V5	1	-0.0962	0.1136	0.7160	0.3974	-0.079855	0.908
V56	1	-0.0445	0.0919	0.2347	0.6280	-0.062681	0.956
V57	1	-0.0753	0.0959	0.6169	0.4322	-0.105380	0.927
V63	1	-0.00139	0.1122	0.0002	0.9901	-0.002006	0.999
TDAYS1	1	-0.00316	0.00156	4.1129	0.0426	-0.228505	0.997
TDAYS2	1	0.000016	0.00309	0.0000	0.9959	0.000670	1.000
TDAYS3	1	-0.00119	0.00431	0.0755	0.7834	-0.043442	0.999
TDAYS4	1	0.0392	0.0165	5.6568	0.0174	1.164712	1.040
TDAYS5	1	0.00075	0.00316	0.0565	0.8120	0.065361	1.001
V65	1	-1.2829	0.4558	7.9216	0.0049	-0.277935	0.277
V25	1	-0.1327	0.2940	0.2036	0.6518	-0.035417	0.876
V53	1	-0.00037	0.00374	0.0099	0.9208	-0.008011	1.000
INTV58R	1	0.0855	1.0214	0.0070	0.9333	0.012079	1.089
INTV5R	1	0.2804	0.1440	3.7887	0.0516	1.662366	1.324
INTV56R	1	0.0318	0.1113	0.0816	0.7751	0.058819	1.032
INTV57R	1	0.1131	0.1118	1.0244	0.3115	0.152217	1.120
INTV63R	1	0.00863	0.1282	0.0045	0.9463	0.011432	1.009
INTYS1R	1	0.00203	0.00201	1.0198	0.3126	0.137758	1.002
INTYS2R	1	-0.00071	0.00392	0.0329	0.8560	-0.021740	0.999
INTYS3R	1	-0.00489	0.00589	0.6875	0.4070	-0.103566	0.995
INTYS4R	1	-0.0348	0.0172	4.0772	0.0435	-0.577093	0.966
INTYS5R	1	-0.00106	0.00332	0.1015	0.7501	-0.089389	0.999
INTV65R	1	0.3196	0.5923	0.2912	0.5895	0.051549	1.377

Association of Predicted Probabilities and Observed Responses

Concordant = 81.0%		Somers' D	= 0.622
Discordant = 18.8%		Gamma	= 0.623
Tied	= 0.2%	Tau-a	= 0.311
(84732 pairs)		c	= 0.811

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ECONOMIC, POLITICAL, AND BUREAUCRATIC FACTORS INFLUENCING A PUBLIC AGENCY'S CONTRACT DECISIONS

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Chicago, Illinois (1997)

This thesis focuses on government purchasing and contract distribution in varying political climates. It takes the reader inside a puzzling bureaucratic realm to investigate who the public agency purchasing process serves: the public, the contractors, or special political interests. The thesis probes and searches for proof of political influence in the awarding of contracts and investigates the distributive effects of a public agency's contract decisions in order to answer the question: "Who wins government contracts and why?".

In the thesis, I develop a multivariate regression model to provide an in-depth analysis of the economic and political factors that may influence government officials when they make contract award decisions. I use a general research model to investigate two competing explanations: (1) the policy model where the low-bidder wins the contract or (2) the self-interest model where a politically favored contractor wins the contract. Twenty-one variables measure the influence of the policy model's five economic factors: financial aspects of the firm and contract, low-bid position, price and CPI, competition, and the firm's pricing tactics. Twenty-seven variables measure the influence of the self-interest model's five political factors:

ward location, political value of era, change in elected and appointed officials, administrative review time, and contract justification.

The model explains change in contractor, incumbent versus challenger, for a sample of 800 contracts awarded by the Chicago Transit Authority from 1981 to 1992. The period includes four different city of Chicago mayors: Byrne, Washington, Sawyer, and Daley, and the model analyzes the agency's contract decisions during each mayoral term and for three different types of contractors. The model's foundation is developed from several disciplines: government procurement, distributive politics and urban politics, normative expectations of political and bureaucratic actors, and cozy relationships expressed as consensus and conflict among the actors.

I found that political influence was selective rather than systemic, and I found that the following four relationships explained change in contractor: firm size explained 6%; price and market competition explained 38%; administrative discretion explained 8%; and selective economic and political intervention explained up to 20%.

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